

small air forces observer

vol. 19 no. 3 (75)
October 1995

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Hungarian Air Force Insignia

Air Forces of the 1920s: Armenia, Azerbaijan, Georgia, & Siberia

Small Air Force Philately

vol. 19 no. 3 (75)

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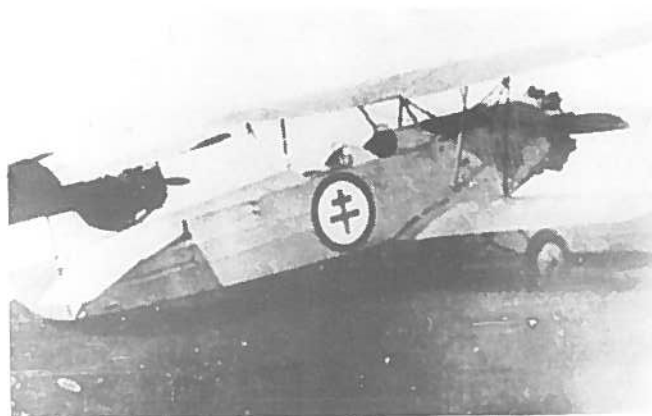
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SMALL AIR FORCES OBSERVER

The Newsletter of the Small Air Forces Clearing House

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SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material. Article published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is

identified in the reprint.

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BACK ISSUES: Either back issues or Xerox copies of out-of-print issues are available for all issues of the SAFO published. For a list of all issues and their content, send two 1st class stamps (or 2 IRCs) to the editorial office.

INFORMATION FOR AUTHORS: Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer should send the manuscript on disc. Photo should be black and white prints although color prints can be used. If you want any photos returned, please mark "Return" on the back. All art work must be ready for printing. The layout should be such that when a page is reduced (if necessary) the drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as

you want them to look. All work for the SAFO is voluntary and no payment can be made for published material.

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COVER COMMENTS: This MiG-21bis, photographed at Taszar AB in 1992, carries the most recent Hungarian national insignia. This insignia has changed many times since the first Hungarian military aircraft flew over 75 years ago. These changes have perplexed modelers and aviation enthusiasts for years. Now, for the first time anywhere, beginning on page 75, SAFCH member Tadeusz Dobrowiecki presents the complete story of this complex history. (Photo L. Javor and F. Zsak via the author)

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"I would like to obtain a copy of 'On Wings of Eagles: South Africa's Military Aviation History' by Dave Becker. This book was reviewed in SAFO #72 and I have written twice to the publisher and have not received any reply. Nor have I heard about it anywhere else. Can anyone direct me to a source for this book?"

Chris Thornburg (SAFCH #174), Mailbox #41, Caller Box 10005 CK, Saipan, MP 96950-9506, USA.

"Air enthusiast and college journalism instructor will consider editing, on extremely reasonable terms, aviation book or article manuscripts in English or in translation to English from other languages."

Ron MacDonald (SAFCH #1331), 620 2nd Street West, Cochrane, Alberta, Canada, T0L 0W1.

"This is an appeal for help on behalf of a friend of mine, a Russian historian who has been working on a book covering the work of some members of the Russian diaspora who worked in aviation abroad after the 1917 revolution.

"One of the most difficult to pin down is C.L. Zakhartchenko who was known to be in the USA in the mid 1920s and collaborated with V. Charles

Levene at the Kaess (sic) aircraft company. In the depression years he left the USA and ended up in China in 1934. From then until 1941 he designed/built aeroplanes for the Canton government. One design was the 'Fu-Shing' ('Fu-Hsing') trainer which was fitted with guns. It was similar to the contemporary Stearman and a number were built, taking part in the Sino-Japanese war. Any information that our readers can pass on would be greatly appreciated."

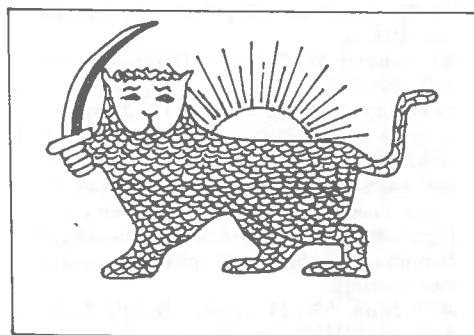
Harry Woodman (SAFCH #533), 10 The Byeway, East Sheen, London, SW14 7NL, England.

"I am looking for the following ClassicPlane kits: DH-9A (2 kits) and Breguet XIV. I can trade kits, magazines, decals, or pay cash."

Don Van Winkle (SAFCH #968), 9302 Kings Cross, San Antonio, TX 78250, USA.

HALF-A-DOLLAR SALE: All magazines \$0.50, soft-cover books \$2.50, hard \$5.00. Mags: Air Classics, Aeroplane Monthly, Sport Aviation, & others. Books by Gunston, Munson, Miller, & Tome-Life. Also 75 sets of 1/72nd a/c decals @ 1 & 2 dollars. \$1 for list - deducted from first order. Bert Leake (SAFCH #665), 4291 Larchwood Place, Riverside, CA 92506, USA.

"I've seen decals for Iran (an old ESCI sheet) that consisted of a red lion and sword motif on a rectangular background. Has anyone actually seen photographs of this insignia used on an aircraft?" Herb Arnold (SAFCH #1235), PO Box 46, Coupeville, WA 98239-0046, USA.



Iran Standard
red lion and sun, black detail, white background
Ref. ESCI decal set

AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Pfenningeldgasse 18/2/14, A-1160, Wien. Write for free sample.)

2/95 (32 pages) "40 Jahre Luftstreitkräfte: Teil 2" 11 pages including 4 photos (J-29 Tonne, Draken, Alouette III, & Turbo Porter), 6 photos of squadron insignia, and 4 pages of tables. "Deutscher Besuch in Pola" 4 pages including 4 photos (Donnet-Leveque & Paulhan-Curtissflug-boots).

BRAZIL

EM ESCALA (IPMS Brazil, Rua Arquias Cordeiro, 316 S/502, CEP 20770, Meier, RJ. Subscription is \$10.00, but they prefer kits or accessories. Send to Antonio Pereira Linhares at the above address.)

4/94 (12 pages) Nothing of small-air-force interest.

ENGLAND

IPMS MAGAZINE (Ernie Lee, 51 Ball Road, Hillsborough, Sheffield, South Yorkshire S6 4LZ, 6 issues for £20.00 (US subscription agent: Wise Owl Publications, 4314 West 238th St., Torrance, CA 90505; since exchange fluctuates write Joe for current rates).

VE/VJ Special, (32 pages) "VE/VJ Spitfires" 3 pages on modeling Mk.21 & Mk.XIVe including 2 side-view drawings. "Task Force 57" 10 pages including history, modeling the Victorious, and colors (with side-view drawings) of Spitfire, Walrus, Corsair, Hellcat, Avenger, and Firefly. "Na Berlin" 5-page '1/76th kitography'. "Ilyushin Il-2" 7 pages including history, modeling, and 6 side-view, one 3-view tome, & 2-view (re-drawn from Planý Modelarskie) drawings.

4/95 (32 pages) "The DH Venom Nightfighter" 3 pages including 6 side- and one plan-view drawings. "King George V Class Battleships: 1937-1945: Part Two" 9 pages including 6 pages of drawings.

SWEDISH AIRFORCE SIG (Ted Burnett, 19 Tintagel Close, Parkside Grange, Cramlington, Northumberland, England NE23 0NZ. Each issue 76p UK, 1.10p Europe, 1.70p USA/Can, 1.90p Far East.)

#15 October '94 (40 pages) "S 31 Spitfire PR XIX" 16 pages including history, camouflage and markings, serial list, review of MPM kit, and 3 pages of side- and plan-view drawings. "The Firefly TT.1 in Svensk Flygtjänst Use" 11 pages including history, serial list, 4 pages of side- and plan-view drawings. "Conversion of the Airfix Catalina PBV-5A into a TP 47" 3 pages including fold-out 1/104-scale 3-view drawing.

#16 January '95 (39 pages) "The Hawker Hunter in the Royal Swedish Air Force" 11 pages including history, one plan- and two side-view drawings, and a 2-page table of individual a/c. "MBB 105 CBS (HKP 9B): Chopping up Choppers" 7 pages including 2 pages of sketches on conversion details and a 5-view drawing. "Modelling the Northrop B 5" 6 pages including a page of sketches on modifying the Rareplanes Northrop A-17 and two 3- and 4 side-view drawings.

#17 June '95 (24 pages) "Beagle Bulldog Prototype 71*FC" 4 pages including story of a/c in Sweden and a 4-view drawing. "Modelling the High Planes 1/72 Scale Kit of the GAF Jindivik" 2 pages including a 2-view drawing. "DHC-4 Caribou TP 55" 4 pages including history, 3 photos, and a side-

view drawing. "The Avro 504 Sk 3 in Swedish Service" 7 pages including history, one photo, and 6 side- and top and bottom plan-view drawings.

[Editor's note: Ted is providing an outstanding service by providing translations of Swedish articles and reprinting some outstanding drawings. Were there more like him.]

FINLAND

MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs).

3/95 #107, (16 pages) "Heinkel He 60" a one-page 1/72-scale, 2-view, tone drawing.

FRANCE

AVIONS: Toute l'Aeronautique et son Histoire (39 rue A. Briand, 62200 Boulogne Sur Mer, France. 420F for 12 issues).

#29 Aout 95 (52 pages) "50 Bougies pour la LA 35" 4 pages including 8 photos (Nord 262, F4U-7, MD 312, TBM-3W, Xingu, F6F). "Le Mirage F1: 7eme partie - Mirage F.1CR" 3 pages including 5 photos. "Les Farman F.220 a F.224: 7eme partie" 7 pages including 16 photos and 2 color side-view drawings. "L'Aviation Francaise du Sultan: Les Unites Aeriennes Ottomanes 1912-1915: 3eme partie" 6 pages including 18 photos (Nieuport monoplane, Bleriot, MF7, Nieuport 17, Caudron G.4). "Du V-1 au V-12 les Debuts de Jerry Vultee" 6 pages including 17 photos (Chinese, USSR, Turkey) and 2-page cutaway drawing. "Les Appareils Francais dans la Luftwaffe 1940-1945" 5 pages including 13 photos (NAA 57, Potez 63.11, C.445, Simoun) and 2 color side-view drawings (C.445 Goeland & LeO 451). "Les Avions Italiens Internes en Espagne 1942-1945" 3 pages including 11 photos (Z.1007, P.108B, SM.82, Ro.43, SM.79). "Nom de Code Morse: Le Supermarine Walrus: 3eme partie" 8 pages including 14 photos and a 2-page 1/72-scale 4-view drawing. "Bancaea 1995: Meeting Aerien de l'aviation Militaire Roumanie" 3 pages with 12 photos (Romanian L-39, MiG-29, MiG-23, MiG-21, IAR-93, Zlin 726, IAR-109, IAR-99; Bulgarian L-39). "Roumanie: Inauguration du Musee de l'Aviation" 2 pages including 7 photos (MiG-15UTI, MiG-19PF, Yak-18, Il-10, La-9, IAR-283, Yak-23).

GERMANY

MITTEILUNGEN (IPMS Germany, Bergengruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

3/95 (40 pages) "Major Siegfried Schnell" 5 pages including 3 photos and a 2-page drawing of his FW-190 A-2.

ITALY

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

#7 Luguo 1995 (100 pages) Color photos: Swiss Hunter '723', Philippine OV-10 Bronco, Serbian Alouette III and Mi-8, UAE Grob G.115T '931'. "Bombe sulla Cecenia" 4 pages including 7 photos. The translations includes the following: "The second stage of the intervention was the destruction on the ground of the Chechen air force, that included many rocket-armed L-39. The Russian Su-25 also destroyed one Tu-154, six Tu-134 and three helicopters." None of the photos show any Chechen insignia expect maybe the Tu-134 which sport a red spiral on a yellow disc, but I suspect this is a civil marking. There's an tantalizing b&w photo

of a damaged L-39 with standard red stars, but covered with graffiti and what appears to be face of some mythological beast on the forward fuselage. More information on Chechen L-39 would be most welcome.

NETHERLANDS

MODELBOUW IN PLASTIC (IPMS-Nederland, PO Box 40082, NL-8016 DB Zwolle).

2/95 (28 pages) "Harrier" 13 pages including 7 pages of 1/72-scale multi-view drawings (P1127, Kestrel FGA1, GR1, AV-8A/C, T2/4, GR3, FR51/2), description of colors (RAF/RN, USMC, Spain, India), and reviews of kits, decals, and references. "VNAF Skyraider" 4 pages including 3 photos and 6 side-view drawings. "Douglas 8A-3N" 4 pages including 3 pages of 1/72-scale drawings.

PARAGUAY

MODELO TERAPIA (Antonio Luis Sapienza, PO Box 2721, Asuncion, Paraguay. US regular issues \$3.00, specials issues \$5.00 - both sent via air mail). **Junio 1995** (7 pages) "Los Grumman JRF-rA/6B Goose de la Aviacion Naval Paraguaya" 2 pages including 3-view drawing. "Los Grumman Panther F9F-2 de la Aviacion Naval Argentina" one pages including side-view drawing. "Transforme su Fokker F-27 en un Fairchild-Hiller FH-227D de la Fuerza Aerea Uruguaya" 3 pages including sketches for conversion and drawings of markings and color scheme.

Julio 1995 (9 pages) "Los Bell UH-B de la Fuerza Aerea Paraguaya" 2 pages including a 3-view drawing. "Los Cessna A-37B de la Fuerza Aerea Colombiana" 4 pages including one 4-view and five side-view drawings. "Un Messerschmitt Bf-109 en la Fuerza Aerea Republicana Espanola" one page including 2 side-view drawings.

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$25.00 USA or \$30 overseas).

#149 August '95 (148 pages) "Charles Matthews Manly" 18 pages including drawings and photos of his engines. "Russian Aero-Hydroplanes" a 13-page story of a torpedo boat that had both hydrofoils and wings (included are photos and drawings of similar machines but which were supposed to fly). Drawings: Farman 40, Roland D XVI, Parceval observation balloon, Aviatik/SAML, Gabardini, & Nieuport Macchi Parasol.

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$25.00 USA or \$30.00 overseas.).

#35 July '95 (84 pages) "Anacostia Flight Tests: Stearman XOSS-1 Seaplane/Landplane" 13 pages including 5 photos of a/c and 8 photos of interior, and 3-view drawing. "U.S. Airline Fleets as of February 1940" 12 pages listing every aircraft and including 13 photos. "The Glenn L. Martin MBT and MT Torpedo Bombers" 11 pages including 15 photos, 3-view drawing. "Those Intriguing Low Aspect Ratio Flying Wings" 10 pages including 18 photos and six 3-view drawings (Snyder-Arup S1, S2, S3, & S4; Hoffman Flying Wing; and XF5U-1). "Racing Notebook - 1929 Travel Air Model R Mystery S" 3 pages including 4 photos and a tone 3-view drawing. "Federal Aircraft CM-3" 3 pages including 2 photos and a 3-view drawing.

Martin Aircraft 1909-1960, John Breihan, Stan Piet, Roger Mason. 208 pages, 18.5 in. by 11 in., 366 b&w and 14 color photos. Softbound, landscape format. Narkiewicz //Thompson, 1331 South Birch St., Santa Ana, CA 92707, USA. \$29.95.

The Putnam books on aircraft companies are justifiably famous. Now, they have some serious competition. American publisher, Narkiewicz//Thompson, have got off to good start on a series of histories of American companies with "Vultee Aircraft 1932-1947" (reviewed in SAFO #66) and the recently-published "Martin Aircraft 1909-1960". The N//T books differ substantially from the Putnam books: N//T books are soft bound with lots of photos (an average of 1.8 large photos per page in the Martin book) and a variety of drawings styles which include some very detailed multi-view scale plans.

The emphasis on illustrative material does not mean the text is slighted. Quite the contrary. The authors, all associated with the Martin Museum, have produced an authoritative text. Their writing is never stuffy and occasionally humorous as when the XP2M-2, the 2-engine version of the 3-engine XP2M-1, is described as having an "enginectomy" or the Baltimore Mk VI GR is described as "the ugliest Martin ever". There choice of photos is a satisfying mixture of company and service photos. Small-air-force interested is provided by photos of Thai, Argentine, and Dutch 139s; a Dutch Mariner; RAF, Free French, and Vichy Marylands; a French Marauder; RAF Baltimores; and a French Marlin. [Editor's note: I've long thought that the only difference between the Dutch 139 and 166 was the continuous canopy on the latter. The authors point out that the 166 had "long canopies and sharply swept wings". They include a side-view of the 166, but no top view. Can one of our reader provide an article for converting the Williams 1/72-scale kit of the B-10 into a Model 166?]

Each a/c type is accompanied by a table of technical specifications and serial numbers. An appendix gives a complete list of Martin Model Numbers for both built and unbuilt types. The extensive references are intelligently grouped by aircraft type. [Editor's note: Unfortunately, no SAFO articles are referenced. Can someone correct this by submitting an article on a small-air-force Martin so it can be included in the next edition of the book?]

The text does a good job of presenting the history of the company (Why did Martin moved from Santa Ana to Cleveland and then to Baltimore?), the development of the aircraft (What were the military requirements for the SeaMaster?), and the service history of the aircraft (How were the MB-1/2 used by the USAAC?).

The content is best described by chapter: "Early Aircraft / California 1908-1917" Small 3-views of the 1909 Flyer and the TT, 17 photos including one of Glenn romancing Mary Pickford in a Model T in a 1915 movie. "GMB / MB-1 / MB-2" One small 3-view of the MB-2 and 17 photos. "MO-1 / M2)-1 / MS-1 / N2M-1" Small 3-views of the MO-1 & MS-1 and 13 photos. "SC-1/-2 / T3M-1/-2 / T4M-1" (Yes, the "C" stands for Curtiss) Small 3-view of SC-1, detailed 3-view of T4M-1 (by Paul Matt), and 15 photos. "XT5M-1 / BM-1/-2 / XT6M-1" Detailed 3-view of BM-1 (by Paul Matt), company 3-view of XT6M-1, and 11 photos. "PM-1/-2 / XP2M-1/-2 / P3M-1/-2" 3-view of PM-2, company 3-view of XP2M-1, and 15 photos. "XB-907 / B-10 / B-12 / B-14 / Model 139W/166 / Model 146" 4-view of B-10B (from Aviation News) and 23 photos. "Model 130 China Clipper / Model 156" 3-view of Model 156 and 8 photos. "PBM-1/-5 Mariner"

Company drawing of PBM-1, 3-view of PBM-5 (from Aviation News), and 23 photos. "Model 167 / XA-22 / Maryland I/II" 4-view of Maryland I (from Aviation News) and 12 photos. "XPB2M-1/-1R / JRM-1/-3 Mars" 3-view of XPB2M-1 and 14 photos. "B-26 Martian / B-26A/H Marauder / AT-23 / TB-26 / JM-1/-2" 4-view of B-26B (probably from Aviation News) and 37 photos. "Bomber Projects XB-16 / XB-27 / XB-33 / Martin-built Boeing B-29" company 3-view of XB-16, XB-27, & B-33, and 4 photos. "Model 137 / A-30 / Baltimore I/VI" small 3-view and 15 photos. "2-0-2 / 3-0-3 / 4-0-4" 3-views of 2-0-2 & 4-0-4 and 17 photos. "XBTM-1 / AM-1/-1Q Mauler" 3-view of AM-1 and 20 photos. "P4M-1/-1Q Mercator" small 3-view and 11 photos. "XB-48" small 3-view and 10 photos. "XB-51" small 3-view and 12 photos. "P5M-1/-2 Marlin" small 3-view of XP5M-1 & P5M-2 and 15 photos. "B-57A/G Canberra" 5-view of B-57B and 15 photos. "P6M-1/-2 SeaMaster" small 3-view and 19 photos. "Missiles" 11 photos. The preceding list is rather long, but I thought it is necessary to show the comprehensiveness of this book.

If I've effused too long over this book, please excuse me. It's just that I am highly impressed by this book and I am afraid that many potential buyers might assume, being soft bound and reasonably priced, this is just another commercial product from the American press. Not! This book belongs on the shelf of all aviation enthusiasts no matter what the extent of their collection or the areas of their interest.

MiG-29 Fulcrum. 4 +, PO Box 27, 198 00 Praha 14, Czech Republic. In USA: 4 + Publications N.A., Mr. Ron Boocks, 855 Bebout Road, Venetia, PA 15367.

4 + Publications continue to out-Aerofax Aerofax with their latest publication, MiG-29: All Variants. Forty-eight A-4 pages, printed on high-gloss paper, are bound between sturdy soft covers. Inside are 7 pages of densely-packed text, divided equally between Czech and English, describing the development and technical aspects of the MiG-29. The description of service history is quite brief; listed are the countries using the MiG-29 - Bulgaria (12), Czechoslovakia (20), East Germany (4), Poland (12), Hungary (28), Cuba (13), India (70 + more ordered), Iran (16 former Iraq a/c), Iraq (41), North Korea (25), Romania (14), Syria (32 + more ordered), and Yugoslavia (16). Deliveries to Jordan, Zimbabwe, and Afghanistan "cannot be verified." and Malaysia has ordered twenty. Fulcrum service in Czechoslovakia is better covered with a list of code numbers and units and a complete description of exterior and interior colors including FS595 equivalents.

However, nobody buys a +4 Publication just for the text, no matter how authoritative it is. It's the illustrative material that stands out. First there are 5 pages of 1/72-scale drawings of the MiG-29 S, SD, M, K, and MiG-29UB. Another page of 1/72-scale drawings shows the various external stores carried by the MiG-28, including rocket pods, missiles, rockets, bombs and cluster bombs, drop tanks, gun packs, and their pylons. A table shows all possible armament combinations.

The great majority of pages is devoted to photos, photos, and more photos; b&w and color photos (16 pages). About half of these are of the complete a/c and the other half are of every conceivable detail both external and internal.

Small-air-force Fulcrums shown in color include

Yugoslav, East German, Czech, Bulgarian, Slovak, Romanian, Germany, Ukraine, and Hungary. The lack of any photos of non-European countries is regretted, but I suppose +4 is justified in presenting what they know best and let others worry about the Near East, Africa, and Asia.

The +4 Publications book on the MiG-29 is highly recommended to modelers planning to super-detail a large scale model of the Fulcrum, modelers putting together a collection of 1/72-scale models of the Fulcrum in various small-air-force markings, and to anyone interested in an outstandingly well-presented book on modern military aircraft. Review copy provided by Michal Ovcacik of +4 Publications.

[Editor's note: A number of these books are available from the SAFCH Sales Service.]

Vought F4U-5, -5N, -5NL Corsair, by Jorge F. Nunez, Serie Aeronaval No.9, 1995. Available via the author at Sixto Laspiur 1801, 8000 Bahia Blanca, Argentina. Price assumed unchanged from previous volumes.

The ninth in his on-going series detailing aircraft operated by the Argentine Navy, this was certainly the most eagerly awaited by this reader. The author has maintained and exceeded, in many instances, the standard set in the earlier eight issues, the chief improvement being in the photo selection and presentation. There are 44 b&w photos, five color, and five line drawings (two side-views, one of a unit insignia, and two showing the instrument panel layout of the Corsair and ordnance networking). The text includes an aircraft-by-aircraft survey of the fate of each aircraft that actually entered service. This was most welcome, and is the first definitive listing published anywhere.

There were several surprises for this reader. The first was that the total of 30 were acquired, in three batches, but that three of these were intended, from the onset, as spares sources. US official documents always site 35, with 28 actually entering service. It was also a surprise to learn that both color schemes associated with the Argentine Corsairs (deep blue overall and light gray) were in use simultaneously and are often seen side-by-side in the same photo. It was also interesting to note the rather wide variation in presentation of the anchor wing insignia on both color schemes. It was also fascinating to learn that one of the Argentine Navy Beech AT-11s (seldom illustrated under any circumstances) was modified with a radome on the nose to train crews in the use of the AN/APS-19A radar, proving, once-and-for, all that these units mounted on some of the Argentine F4U-5Ns and -5NLs were indeed active.

The text and captions are in Spanish, but is certainly understandable and well written. The numbers in this series are surely destined to become collector's items, and our readership would be missing a bet if they did not undertake to obtain this entire series. This effort deserves the support of SAFO, and, in this reader's mind, comes close to the ideal format that the membership would want to be associated with.

Dan Hagedorn (SAFCH #394), PO Box 682, Centreville, VA 22020-0682, USA.

Vought F4U-5, -5N, -5NL Corsair, by Jorge F. Nunez Padin. Serie Aeronaval #9. Museo de la Aviacion Naval Instituto Aeronaval. Review copy provided by the author.

SAFCH member, Jorge Nunez, continues his excellent series of monographs on Argentine Naval

aircraft with the Vought Corsair. The format remains the same: 40 pages, 15 cm by 22 cm. printed on a high-gloss paper. This volume contains 43 b&w photos, 4 color photos, a pair of side-view drawings, and the individual history of each Argentine Corsair. Chapter headings are: "Historia" 5 pages. "Tecnica" 3 pages. "Identificacion" 4 pages. "Preservados" one page. "Colores & Insignias" 2 pages. An appendix provides a Cross Reference Table listing Type, USN BuAer Number, Armada Serial, and Fate.

The Argentine Corsairs two great color schemes: an overall dark sea blue with white serials and anchor insignia on the wings; and a Light Gull Grey with black serials and anchor insignia. Both schemes sported blue/white/blue stripes on the rudder and stabilizers and the complicated Argentine Naval insignia on the fuselage. These schemes are guaranteed to get the modeling juices flowing. I hope the Italeri kit of the F4U-5N is a good one, and that someone (Maybe Delta? See decal review elsewhere in this issue of SAFO) will produce a decal sheet worthy of this subject. Review copy provided by the author.

[Editor's note: I will try to get some of these for sale through the SAFCH Sales Service. In the meantime, contact the author at: Sixto Laspiur 1801, 8000 Bahia Blanca, Argentina.]

Hansa Brandenburg D.I 1916-18, Meindl, Schroeder, Totschinger. Sonderheft 22. OFH Nachrichten, Pfennigeldgasse 18/2/14, A-1160 Wien, Austria. Price are 60. Payment by currency or IMO. (No checks accepted due to the high redemption costs.)

This is another of the Austrian Aviation Historian's excellent Specials. This 36-page, A4-size monograph, covers the service of the Hansa Brandenburg 'Star Strutter' in Austro-Hungarian service. There are 7 photos (well-reproduced on the inside of the sturdy, glossy cover), 30 side-view drawings, and 1/48-scale drawings of both the 28. and 65. series a/c. Three pages of text describe the history and technical aspects of the aircraft, but the bulk of the text, 16 pages, is a day by day report of actions involving the D.I. My only regret is that there are no drawings of non-Austro-Hungarian Star Strutters. Were there any?

This monograph is recommended to the everyone specifically interested in Austro-Hungarian a/c, and to anyone with a general interest in WWI who can read German.

Lithuanian Technical Museum, Veiveriu 132, Kaunas 3010, Lithuania.

There are many reasons to celebrate the regained independence of the Baltic countries. However, for

the aviation historian, this event is particularly poignant for it provides a final opportunity to record the long-suppressed stories of the people who participated in pre-WWII aviation in this region. The Lithuanian Technical Museum, realizing the limited time remaining to record this history first hand, is honoring their patriots with a series of biographies. The three volumes at hand are quite similar in format: soft bound, 14 cm by 20 cm, with interesting photos acceptably reproduced on medium-grade paper. They differ substantially in number of pages.

#2 Likimo Vingiai (Wings of Fate), Simas Stanalitis. 144 page.

The memories of a Lithuanian military pilot, president of the disabled soldier's association, captain of the national chess team, prison of the Gulag. Lithuanian a/c shown in the photos include LVG C.VI, Anbo-I, Dobi-III, Albatross BII, Fokker D.VII, Friedrichshafen G.IIIa, and SVA-10.

#3 Karo Lakuno Pasakjimai (Narrations of a Military Pilot), Leonardas Peseckas. 124 pages.

Memories of a military pilot, one of the founders of the Lithuanian Flying Club, emigrated to US in 1949, died 1976. Lithuanian a/c shown in the photos include Fokker D.VII, Martinsyde F-4, Letov S-20, Ansaldo A.120, Fiat CR.20, Sopwith 1 1/2 Strutter, LVG C.V, Anbo-II, Anbo-41, Anbo-VIII, and Dewoitine D.501.

#8 Gyvenimo Skrydis, Jonas Mikenas. 98 pages. Photos of Lithuanian a/c include Albatros C.I, Albatros C.III, Fokker D.VII, Dobi-II, SVA-10, Anbo-I, Letov S-20, Martinsyde F-4, Fiat CR.20, Anbo-II, Anbo-IV, Anbo-41, and Dewoitine D.501.

Review copy provided by Saulius Stulas. Saulius has also provided a 2-page summary for each of these volumes. To confirm the availability of any of these volumes or to find out what other volumes are available, contact Saulius at the Technical Museum.

Final Assault on the Rising Sun: Combat Diaries of B-29 Air Crews over Japan, Chester Marshall with Warren Thompson. Hardbound, 7 in. by 10 in., 225 pages. 170 b&w and 46 color photos. Speciality Press, 11481 Kost Dam Rd., North Branch, MN 55056, USA. \$29.95.

The subtitle accurately describes this book; a description of the B-29 attacks on Japan as told by the crewmen. The lead author (Marshall), a B-29 pilot who flew 30 missions, connects the recollections of crewmen with historical commentary and excerpts from his own combat diary. The result is an extremely intimate account of the boredom and horror of war as experienced by ordinary men who serviced and flew the aircraft that brought Imperial

Japan to surrender. While most of the accounts are by B-29 crewmen, contributions by the men who flew the P-51s escorting the bombers over Japan and the night-fighting P-61s defending the island air bases from Japanese bombs are included.

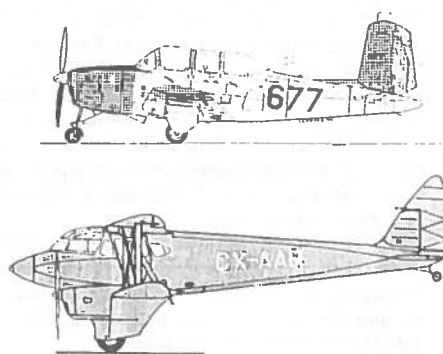
This book is not without its errors. Out-right goofs are mostly the responsibility of the person who wrote the photo captions for the color photos: "Shown here are two Val Dive Bombers" when what is really shown are two Ki-55 Ida Advanced Trainers. And, "Claude Logan, a navigator in the 500th Bomb Group, Seventy-third Wing, Saipan, cuts a stalk of sugar cane near an abandoned Japanese tank.", but the vehicle is a Sherman tank. These errors do not diminish the emotional impact of the first-hand account. Moreover, the photo selection is outstanding; they all seem to have come from personal collections and have probably not been published elsewhere.

A major complaint is there is no indication when the accounts were written. Most are obviously excerpts from diaries. But other were obviously written much later. For example, in his account "Last Mission", Horatio W. Turner III, Airplane Commander, 315th Bomb Wing, 502nd Bomb Group, 411th Squadron, reports "General Hap Arnold, Chief of Staff for Air, who cast the only vote against use of the atomic bomb at the Potsdam Conference on July 16, had sent General LeMay home from the Pacific in June to talk to Present Truman and the JCS to persuade against the invasion in November. In the time remaining (July to November), the air offensive in Japan, as being conducted, would completely annihilate all targets of any consequence. If it were not for stubborn insistence of the majority of the decision-makers that there must be an invasion, the atomic bombs might not have been used. The outcome would have been the same with or without the atomic bombs." I wonder what Commander Turner wrote in his diary the day of his last mission.

Considering the current debate over the decision to use the atomic bomb and the pedantic weighing of actual vs. projected casualties by people who were probably born after the war ended, this book serves the important purpose of providing a perspective on the degree of success achieved by 'ordinary' bombing and its cost in American lives. This book is a "must read" for everyone interested in a logical discussion of this controversy. And, don't assume that, because the author was a "military" man, he comes up with the expected conclusion (or any conclusion at all). This book will cause the reader to think, and, after all, isn't that why history has to be studied?

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Aero Noticias, Revista Uruguay de Aviacion, No.25 Junio 1995. SAFCH member, Eduardo Luzardo, sent this magazine from his country, asking that I bring it to the attention of SAFO readers. This issue consists of 68-pages printed on good-quality paper which allows excellent reproduction of the photos. The only color is the cover which features the Swedish Grippen. The contents, however, are slanted towards aviation in Uruguay: "La Pluma que Fue" 9 pages including 10 photos of Pluna's De Havilland DH-90 Dragonflies 'CX-AAS' 'San Alberto', 'CX-ABG' 'San Filipey Santiago', & 'CX-AAR' 'Churrinche', and Air France's Potez 62 'F-ANPI'. There is also a nice full-page, 3-view drawing of Dragonfly 'CX-AAR'



in overall red with white registration numbers. "El T-34 Mentor en la Fuerza Aerea Uruguay" 4 pages including 6 photos and a full-page 4-view drawing of 'FAU 677'. "Historia de los Avro Lincoln en Argentina" 4 pages including 4 photos.

If this issue is typical of what appears in Aero, then this magazine should be of more interest to SAFO readers than most other commercial magazines coming from South America, or, for that matter, from many other countries. Their address appears to be: Casilla de Correo 1551, Correo Central CP11000, Montevideo, Uruguay.

Insignia of the Hungarian Air Force from WWI to the Present

Tadeusz P. Dobrowiecki

The national insignia used by the Hungarian Air Force changed frequently in response to the complicated politics of Central Europe. Particularly interesting is the period between the wars when Hungary, officially banned from having an air force, was secretly developing one.

Austria-Hungary Period

During WWI, Hungarian a/c wore the markings of the Austro-Hungarian AF; a black Cross Patee (later Balkan Cross) on white with red-white-red strips on the wing tips and the vertical tail (naval a/c also carried the coat of arms on the tail). No official Hungarian insignia was used at that time. The only exception was a navy ensign which consisted of the Hungarian coat of arms alongside the Austrian shield on the white strip on the tail (1915). Never made official, it appeared on some of the large flying boats (1). As an example of personal markings, Béla Macourek, CO of Flik 17, had red-white-green strips on the fuselage of his Aviatik D.I, nr 338.02.

Hungarian Soviet Republic, 1918-1919

By the decree of 24 March 1919, a/c of the Hungarian Red Air Force were marked with red-white-green chevrons painted on the fuselage and the wings (2). Red stars appeared on 25 April 1919; first as the well-known red star in a white square on wings, fuselage, and rudder (5). Later, on camouflaged a/c, the white squares were deleted and the stars got thin outlines (6).

The Beginning of the Clandestine Air Force, 1919-1923

Air Force units remained overt until Feb 1920 when the victorious powers banned all military flying. After the defeat of the Soviet Republic, the Aviation Command of the Hungarian National Army had been reorganized as the Air Transport Department of the Ministry of Commerce. The first director was Col. I. Petrőczy, ret., a former chief of Austria-Hungary Air Force training and supplies. The Air Force became MAEFORT (Magyar Aeroforgalmi Rt, Hungarian Aerotransport Holding Co.), with recon and bomber a/c classified as civil transport. The markings of that period (decree of 20 January 1920) became the letter H and a code consisting of letters for a/c type and a serial number in black on a white rectangular panel painted over the stars on fuselage and wings (3)(4). On 4 June 1920, a peace treaty was signed in Trianon. As part of this treaty, all flying and a/c manufacturing was banned. This full ban, was initially for 6 months, but it was extended many times remaining in force until the end of 1921. In the meantime, the entire Hungarian a/c industry and all a/c located by the Allies were destroyed.

Air Force in Hiding, 1923-1927

The total ban on flying was relaxed in 1923, when sport aviation and transport a/c production was allowed (supervised and limited to 60 HP/ person, 600 kg load, speed 170 km/h, altitude of 4000 m, and 4 hour of fuel). On 28 April 1923, the Secretary of Commerce issued the first regulation (nr. 45.340) concerning the a/c markings. All a/c were to wear registration in the form of 'H-Mxxx'. These were to be painted in black on a white background, on the lower surfaces of the lower wings and on the upper surfaces of the upper wings for biplanes, on both sides for the monoplanes (H-M on the one side, 3 letters

on the other), and on the fuselage.

The height of the letters (h) on wings was 4/5th of the wing's chord, on the fuselage 4/5th of its thinnest cross section. The letters were 2h/3 wide, h/6 thick and spaced half letter wide. The width of the hyphen was maximized to a single letter's width. The registration of all of the a/c, beside the government owned and those of the transport companies, was underlined (line h/6 thick and in h/6 distance from the letters). It was also possible to paint the letters in white on black on the lower surfaces. The new registration was also issued for the secret military trainers, flying until that time without any markings (8)(9).

To evade supervision, the Air Transport Dept (secret AF Command) was reorganized on 5 April 1924 (decree nr 45.179/1924) as the Aerial Office of the Ministry of Commerce (KM Légügyi Hivatala - LÜH). For secret military trainers, the Air Office introduced separate serials. Col. Petrőczy, author of the Austria-Hungary's 4 digit serials (factory, a/c type, place of serial production and in-series digit) adopted a similar scheme for the LÜH. Secretly manufactured planes used three factory codes as follows: 1-MÁG (Mátyásföld), 2-Weiss Manfréd Factory (Csepel), 3-ReGJÜ (Sóstó, Székesfehérvár).

LÜH serials were painted in a 50 cm by 20 cm rectangle in the middle of both sides of the tail (12)(14)(15). The first covert AF units were created in 1926-1927 and were equipped uniformly with Lóczy Hungária a/c. Air Force squadrons were organized under cover of the Government Pilot School (REGVI) in Szombathely, Debrecen Aero Club (DAC) in Debrecen, Mátravidéki Aero Club (MAC) in Miskolc, Somogy megyei Aero Club (SAC), and under the cover of the Sport Flying Assoc. of the Tech. Univ. of Budapest (MSrE) and Budapest Sport Assoc. in Mátyásföld (BSE). From 1925, at the school in Szombathely, 5 Udet 12a and 5 Bristol School a/c were used without any registration, only small 'a-e' Gothic letters were painted on the Udet tails (10), and capital 'A-E' letters on the tails of the Bristol a/c.

Development after the Relaxation of Control, 1928-1938

The limitations were relaxed by 1927. From the beginning of 1928, Weiss Manfried A/c and Motor Factory (Weiss Manfréd Repülőgép és Motorgyár) started production of various Fokker and Heinkel types, Jupiter motors, etc. The first Weiss Manfréd (WM) Heinkel HD 22 left factory on 1 May 1928. The number of personnel in the secret Air Force increased to 1174 in 3 recon squadrons (Fokker C.V.), one experimental fighter squadron (Fokker D.VI, D.VII, D.XVI), one experimental transport (bomber) squadron (Fokker F.VII, F.XI, F.VIII), and 2 school squadrons (Hungária, Udet, HD-22). In 1929, the first Italian bombers and fighters arrived (Caproni Ca-101, Fiat CR-20), and from 1930 LÜH personnel wore military-style uniforms. LÜH serials became standard from 1927, and, until 1932, they were always painted beside the civil registration.

During secret exercises in the summer of 1931 (code name "Csaba"), as a temporary military insignia a double St. Stephen's cross was painted over a tricolor square (7). Next year, in the autumn, during another exercise (code name "Sólyom" or "Hawk"), a roundel was used consisting of a green cross on a white background with red outer ring, painted on wings and fuselage. The tail carried the Hungarian tricolor (13). It was also

planned to use this insignia in the event of mobilization; it was never used.

The LÜH serials were important for a/c used entirely within the borders of Hungary. However, the civil markings, painted in small letters under the LÜH serials, were difficult to see. The tails were already painted in tricolor. Because of protests by neighboring countries, the use of the tricolor on the a/c flying abroad was prohibited. Those a/c had a large H on the rudder (LÜH decree from 1932) (9). A regulation of 5 May 1933 changed the form of the civil registration to 'HA-xxx'. The painting of the large H on the tail and the underlining of the registration was cancelled.

Because of the large number of a/c imported from Italy in 1934 and the difficulty in reading LÜH serials from a distance, large digits were used on the sides and the top of the fuselage (Ca.101/3m, Cr-20, Cr-32), according to the place of the a/c in the formation. These formation numbers were totally unrelated to the LÜH or civil registration (12)(65). Limited home production and increased imports led to the redefinition of the LÜH serials according to the source of the a/c and its task. Development a/c got the source and task digits increased by 100. Transport and military a/c wore thus 4 digits, the development types 5 digits and the school a/c only 3.

A decree of the Secretary of Commerce in 1937 (nr 70.200/1937) declared the return of the tricolor to the tail of all civil a/c. Aircraft belonging to the secret Air Force wore similar colors, they had, however, no large civil registration. On those a/c, the civil registration was painted, as before, under the LÜH serials (14)(15). Military a/c were thus difficult to distinguish. Units started to identify them with squadron codes painted behind the cabin on the fuselage (e.g. 1/5 for the 5th squadron of the 1st Fighter Group). Also, at that time, squadrons developed their own colorful squadron markings (12). That system remained until the creation of an overt AF in 1938. In 1937 (Munich crisis) some military a/c were camouflaged (Ju 86, WM 21) while the others remained in silver finish.

Overt Air Force, 1938-1939

On 22 April 1936, the Hungarian Secretary of State announced the country's demand for the right to arm itself. Later, on 20-23 August 1938, the Little Entente (Czechoslovakia, Yugoslavia and Rumania) signed an agreement with Hungary approving the right to arms and renouncing mutual violence. Hungary was entitled, among other things, to an Air Force, which, on 1 January 1939, became the Royal Hungarian Air Force (Honvéd Légierő) an independent branch of the Armed Forces (Honvédség).

As the first insignia, a red-white-green chevron was chosen (red outermost) with proportions (height:base = 2:1). This was painted on wings and tail (decree of the Secretary of Defence, 23 August 1938, nr 30.418/1938) (16)(17)(18)(19). Measured with respect to the base of the chevron (b), the width of the red strip was $b/8$, and the base of the green triangle $b/4$. On the lower and upper surfaces it was located at a distance $1/7$ th of the wing's span from the wing tip. On the tail, it was located at mid height over the tail plane with the vertex in the direction of flight. On a/c with multiple tails the chevron was painted on the external surfaces of the outermost rudders.

In addition, a modified version of LÜH serials was introduced. This consisted of a letter and 3 digits. The letter designated the purpose (V - Vadász (fighter), B - Bombázó (bomber),

F - Felderítő (recon), G - Gyakorló (trainer), I - Iskola (school), etc.), and the digits signified the order in which various types (1st digit) and particular a/c (remaining digits) had been put into service. The dimensions of the serials and their placement varied according to the a/c type. Silver finish disappeared, finally, in October 1938, when the occupation of the Slovak territory began. Camouflage was applied accordingly to the local means and likes, resulting in a diversity of patterns and colors.

WWII 1939-1945

When Hungary joined Germany in the invasion of Yugoslavia (6 April 1941), Hungarian a/c serving in the conflict received the so-called "unified Axis anti-aircraft markings": yellow motor cowling, tail, and under side of the wing tips (from the wing tip to the chevron), and also a 50 cm wide band on the fuselage just behind the cabin (order nr 108.888). The reason for this was that there were quite a number of modern German-made a/c in active service with the RYAF. In a matter of weeks, the chevron was reinstalled on the tail, leaving only the fuselage band and the yellow cowling. After 19 June 1941, the yellow band was moved to the leading edge of the tail planes. Order nr 56097 regulated the painting of the serials disturbed by the ring.

After the declaration of war against Soviet Union, it became obvious that the visibility of the chevron was poor; many times German pilots shot at their Hungarian allies. In addition, the German pressed for the unified insignia for all of the Axis powers. For Hungary, they even proposed to reintroduce the Cross Patee. The General Staff of the RHAf, on the other hand, proposed (decree nr 59.120/1941) an insignia consisting of a white cross framed in black in a green square framed red (20). Experiments showed, however, that, in this form, colors were difficult to recognize. A simpler insignia (21) had been proposed by the AF Command. It differed from the German insignia at least in the inversion of colors. To emphasize the Hungarian nationality, both the General Staff and the AF Command proposed the painting of the tricolor on the tail planes (22). The dimensions were only approximate, and had to be defined for each a/c type.

The new insignia was finally approved on 12 March 1942 (decree nr 142.415/1942): a white cross on a black square, on wings and fuselage, and a tricolor on the tail, with the red innermost, on tail planes (24). Units markings remained as they were. The decree did not regulate the dimensions for the various a/c type. The outer border of the insignia was at the $1/7$ th of the wing span, measured from the wing tip. Symmetry line of the cross was the longitudinal bisecting line of the wing. For monoplanes, the upper and lower insignia matched each other. For biplanes they were in $1/7$ th span on both the upper and the lower wings. On the fuselage, the insignia were at the midpoint between the trailing edge of the wing and the leading edge of the tail plane. The national colors on the tailplanes were painted parallel to the longitudinal axis of the a/c (23). The width of the strips was $1/3$ rd of the height of the vertical tail and $1/3$ rd the half-span of the horizontal tail. However, for larger a/c, they were maximized at 40 cm (28)(29). On a/c with twin tails, the tricolor was painted only on the external surfaces. If the insignia on the fuselage coincided with the serials, the digits had to be moved forward between the insignia and the nose of the a/c (27).

The decree regulated the order of the national colors with drawings. However, there were squadrons which did not obtain the full decree or had been notified about the change only

verbally. Therefore, there are cases where the tricolor had been painted in reverse order (25 right). It was used in this form on the Héja a/c of the "Bumble Bee" 1/5 squadron on the Eastern Front. It is not yet proven, but probable, that this arrangement was also used during the first training on Bf-109F-4Bs on the Eastern Front (Nov 1942 Feb 1943). On these a/c, all other insignia remained German; only the tricolor indicated Hungarian sovereignty (39).

Two versions of the cross were used: the larger: 104 cm x 104 cm cross, with a width of 30 cm, within a 120 cm x 120 cm black square; and a smaller 68 cm x 68 cm cross, with a width of 20 cm, in a 80 cm x 80 cm square. These were painted in three configurations on wings and fuselage (decree nr 53.547/1942). (1) Both crosses were small on Ar-96, Bu-131, He-112, Fw-56, Me-108, Fi-156, Fokker C.VD, Solyóm, He-46, Bp9, Bpl4, Cr-42, Cr-32, Cr-30, Ro-41, Ro-37, Br-25, and HD-22. (2) Large crosses on wings, small ones on fuselage on He-70, Fw-58, Heja, and Ca-135. And, (3) both crosses were large on He-111, Ju-86, Ju-87, Ju-52, and Ca-101. As the dimensions of the crosses were fixed, on many a/c, the yellow ring touched the cross (30)(31).

Toward the end of the war, some insignia differed in form and dimensions from those regulated by the decree. In August 1944, when Rumania left the Axis powers, German and the Hungarian a/c in front-line service painted on the lower left wing an inverted white or yellow 'V' letter pointed backward (31)(34)(36). From October 1944, RHAF received more German a/c. The German cross was usually overpainted and the white cross made gray for lower visibility (38)(40). Note a very thin black border of the cross on the wings (63). Occasionally, the white in the tail tricolor was also toned down (64). Later, German insignia were often left untouched (36). From the winter of 1944, the tricolor on the tail was usually reduced or entirely eliminated (33)(35)(38). For example, on the Fw-190, the red-white-green strips were only on 1/3rd of the rudder, with the German swastika still on the tail (26)(31)(34). By that time, the colors were no longer painted on the horizontal tail planes. By the end of the war, the 102. Fighter Bomber Group received Fw-190F-8 bombers. The first 18 a/c were received, in October 1944, by 102/1 "Pavian" squadron. In Dec 1944/Jan 1945, 18 more were received by 102/2 "Puli" squadron (W.501W.572). Serials were painted in black only on the first 18 a/c (31). On the second batch, the last two digits of the serials were painted white on the motor cowling (31)(34). To paint over the 36 a/c received after Jan 1945 was not possible. They flew partly with German markings, with only white serials (from 37 to 72) on the cowling (36).

From the end of 1944, a/c were marked only by small serials painted behind the pilot's cabin, e.g. the last Bf-109 a/c manufactured in Győr (MWG) wore only those markings. At the end of the war, because of the large number of a/c received from the Germans, the factory-issued serial system collapsed and the choice of serial was left to the units. Also because of the cold and the lack of materials, German markings were left as they were. The swastika was occasionally painted over with lime.

Additional Notes

No official decree regulated the size, shape and the color of the serials (see e.g. (18)(19)(30-40)(66)). The serials were relatively small on the uncamoouflaged a/c during 1938-1939 (dark, sometimes with a shadow). They were larger on camouflage a/c (red, then black). Finally getting smaller and low-visibility at the end of the war. The hyphen between the letter and the digits

changed in time to a period, then disappeared entirely.

On some a/c (Fw-189, Bf-109) the white cross was painted with slightly different proportions (67), possibly a misunderstanding of the regulation or the utilization of the German cross as a pattern.

Lieutenant László Szénássy, serving in the Experiment Jagdgruppe/ J.G. 11. (Hannover-Celle, October 1944) had on the tail of his Fw-190 a small Hungarian tricolor just between the swastika and the tail planes (61).

Fw-58KI-2 Weihe, nr S-003 liaison a/c, wore cross insignia with the civil tricolor from 1937; Fw-58C Weihe AF Commander liaison a/c had cross insignia mixed with the civil registration (HA-XBG) instead of LëUH serials.

Many photos show mixed insignia (chevron and a tricolor, chevron and cross, etc.). These were probably taken during the repainting or show a/c with replacement parts.

Post War Period, 1948-1951

The flight ban for Hungary was lifted by the Allied Control Committee in June 1947. However, only 7 a/c could be put together from wrecks. The first AF squadron (5 Bu-131) was organized by 1 October 1947. The first official markings for the Hungarian People's Army were described by a decree (14 April 1948, Honvédségi Közlöny, 1948, nr 12) as a red roundel with an inscribed white triangle in which was inscribed a green circle; the tricolor was carried on the tail planes (41)(42)(43). The roundel was painted on upper and lower wings, its center at 1/6th of the wing span, measured from the wing tip. The diameter of the roundel was half of the wing chord in that place.

Registration numbers were painted on both sides of the fuselage, starting from the trailing edge of the wing. They consisted of a capital letter stating the purpose of the a/c, a hyphen and a serial number of the a/c (3 digits) (I - Iskola (school), G Gyakorló (trainer), S - Szállító (transport), etc.). Letters and digits were painted for small a/c within an area of 20 cm x 30 cm; for larger ones within a 35 cm x 50 cm rectangle. The size of the letters and the spacing were 5 cm and 8 cm respectively.

Various numbers had been reserved for the particular a/c types: from 001 on were used on special purpose a/c or for a/c manufactured in a single example. For example, an EM 29 "Csoka" (Jackdaw) has been restored during September 1948 at the Aero Ever factory in Esztergom. It appeared for the first time with the I-001 registration in documents dated 11 November 1948. R-18A "Kánya" (Kite), registration I-002, had been manufactured in the Aero Ever factory for military order (first flown on 18 March 1949). The 003 registration was not used, probably reserved for the SG-2 prototype, ordered from the Dunai a/c factory on 25 June 1948. 009 was also not used, possibly reserved for the second (this time metal wing) example of the SG-2. Of the 35 UT-2 Soviet trainers received on 10 September 1948 at Mátyásföld, two could be used only as ground trainers (I-010 & I-011). Between 1948-1949, the first independent a/c workshop and the Dunai a/c factory restored, from wartime wreckage, more Arado Ar-96A "Varjú" (Crow) and Arado Ar-96B "Holló" (Raven) trainers. These a/c received registrations G-301-306 and G-361. Twenty Avia C-2 (Ar-96B) received registration from G-351 on and from G-362 on.

The insignia and markings introduced in 1948, were changed by the Army Command on 15 November 1949. Part of the reason for this was that the insignia in use were almost the same as that of Lebanon. On the other hand, the Command

wanted to express the shift in political power by introducing the red star. The modifying decree appeared in the *Honvédségi Közlöny* 1949, nr 34. The new insignia were a red star inscribed in a ring of national tricolor. These were to be painted on upper and lower wings, fuselage, and tail (44)(45)(46). The outer diameter of the ring, for small a/c was 60 cm; for medium ones 80 cm; and for large ones 100 cm (with the inner diameter of the ring 40-60-80 cm respectively). The 20 cm ring was divided into equally wide red-white-green strips, red the outermost. Registration numbers were painted 10 cm under the tail planes, ending at its leading edge, within a 10 cm x 31 cm rectangle.

The insignia were changed shortly thereafter. On 5 January 1950, it was ordered that insignia should not be painted on the upper wings. The regulation wasn't, however, always followed. On the tail, insignia was moved to approximately the center. On some a/c, the insignia on the fuselage were smaller than those on the wings and the tail. They were painted however on all a/c.

It turned out that the registration numbers were too small to identify a particular a/c. Therefore, two large identification digits were painted on the fuselage by the units. Their placement varied, they were painted just aft of the insignia most often at the midpoint between the insignia and the leading edge of the tail plane. The size of the digits was generally by 20-30% larger than the diameter of the insignia (47). On most a/c, this number was not related to the registration number (it served only the identification within the unit).

The registration number, which had lost its original function, was finally deleted. Order (nr. 012, Apr 24, 1950) regulated that a/c should be identified by its manufacturing number. Its last 2, 3, even 4 digits were painted with rounded or squared numerals in red, with white border, on the fuselage.

In the summer of 1950, the Anti-Aircraft Command signaled, that the insignia were difficult to be distinguished from the Yugoslavian ones. At a meeting held on 6 July 1950, it was decided that, for economic reasons, the form of the insignia would be kept, only star would be enlarged with points sticking out of the tricolor ring. This style insignia was painted for trials on a single a/c, but proved not suitable for the purpose.

Star Period, 1951-1990

The final version of the star was decided on 16 June 1951 when a red star was introduced. Inscribed within the star were white and green circles (50). Figure (48) shows an early or mispainted (?) form of this insignia. The dimensions of the star were the same as those of the ring insignia (diameter of 60-80-100 cm). The diameter of the inscribed white circle was 20-27-33

cm, that of the green circle 10-14-17 cm, respectively. The star had one-cm wide white border and was painted on the wings, fuselage and tail.

Revolution of 1956

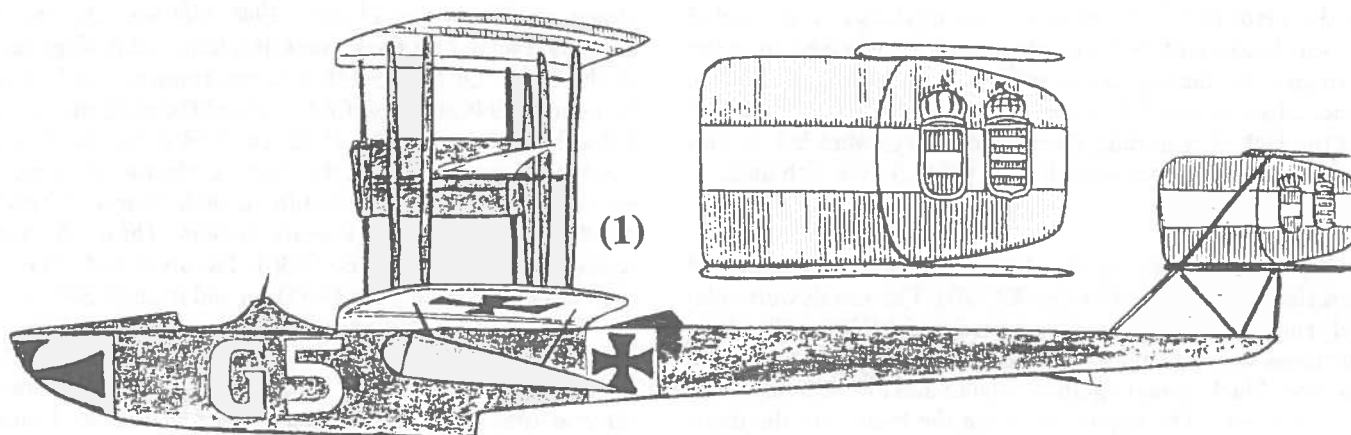
During the Hungarian Revolution of October-November 1956, a temporary insignia in the form of a rectangle with the national tricolor were painted on some a/c (51)(52)(49). There are also photos of a/c bearing national tricolor in a triangular shape (Jak-II trainer) (56), or even chevron-like insignia (53)(54)

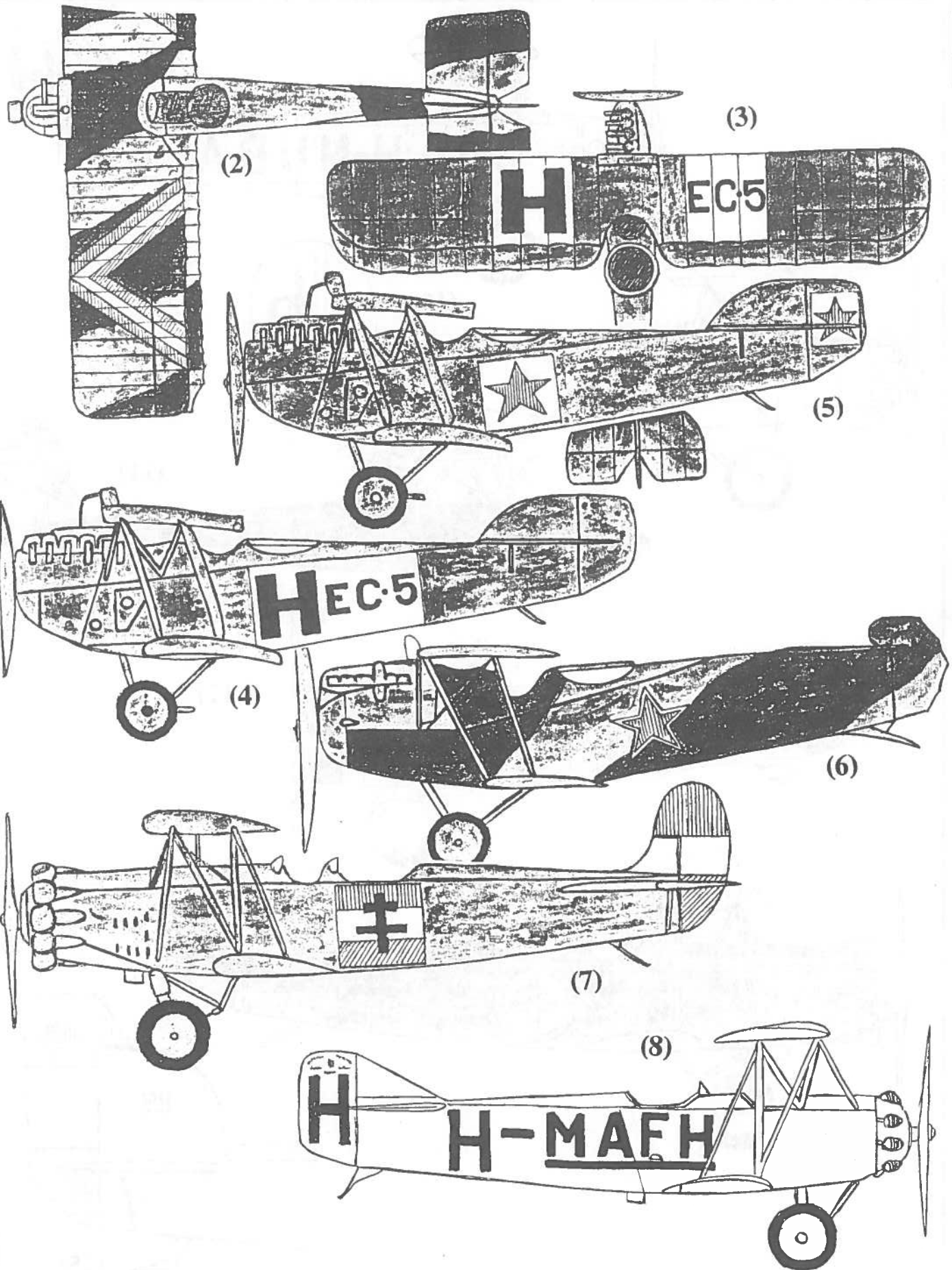
The Present 1990 -

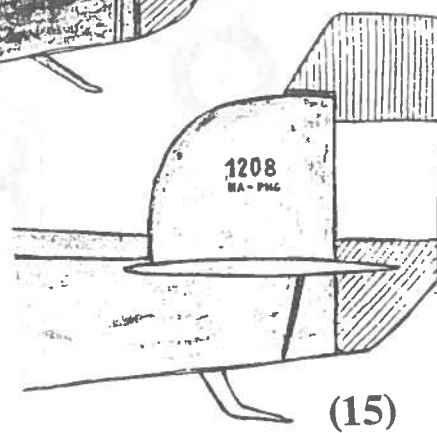
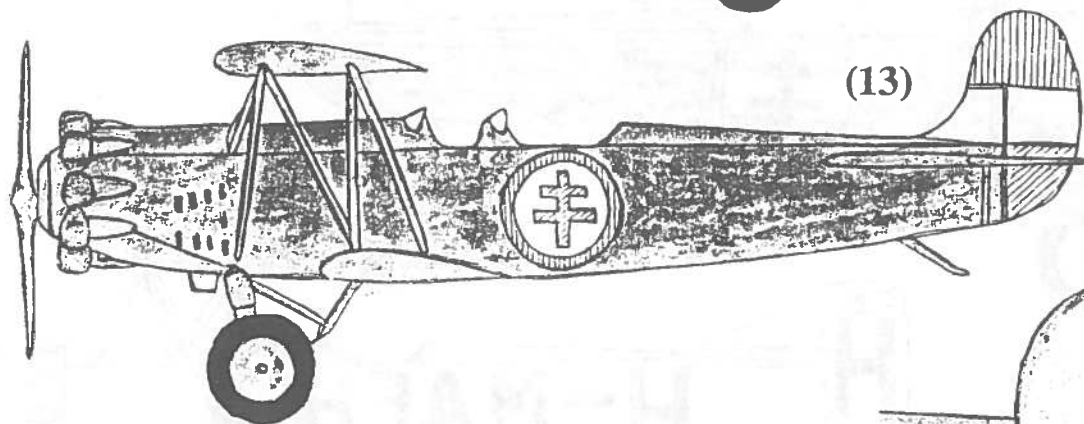
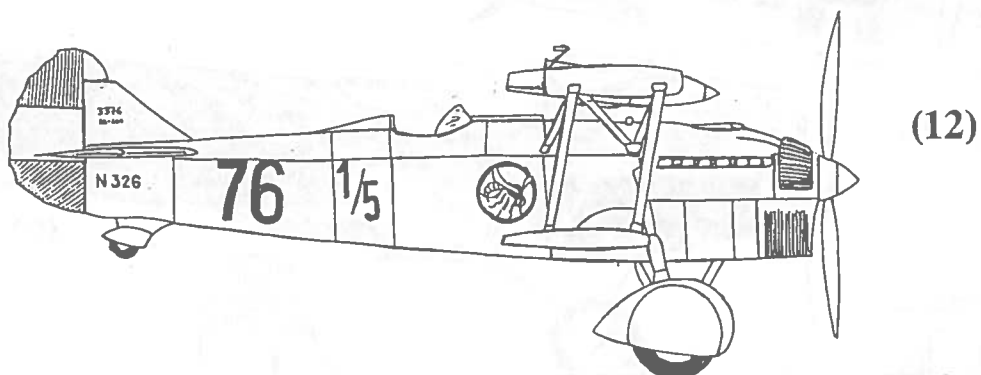
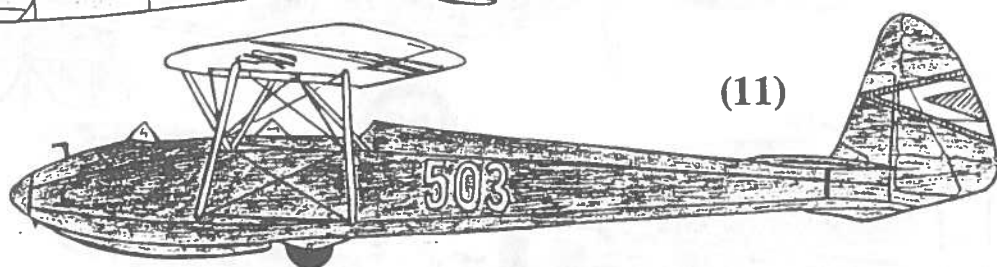
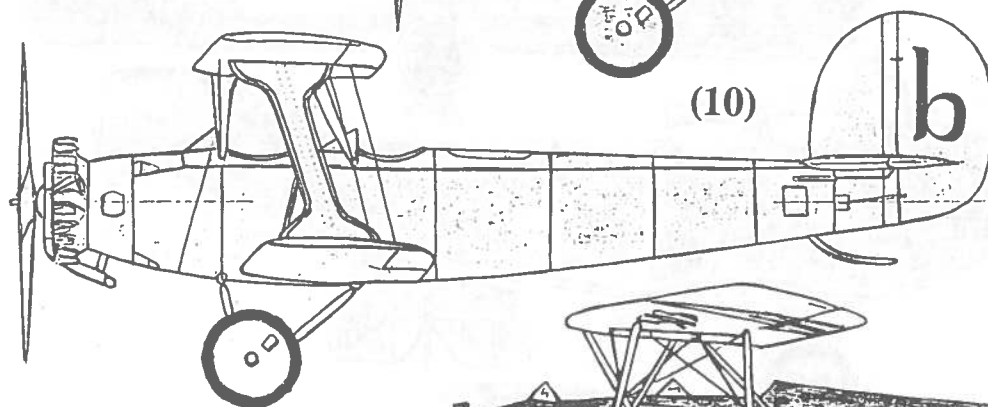
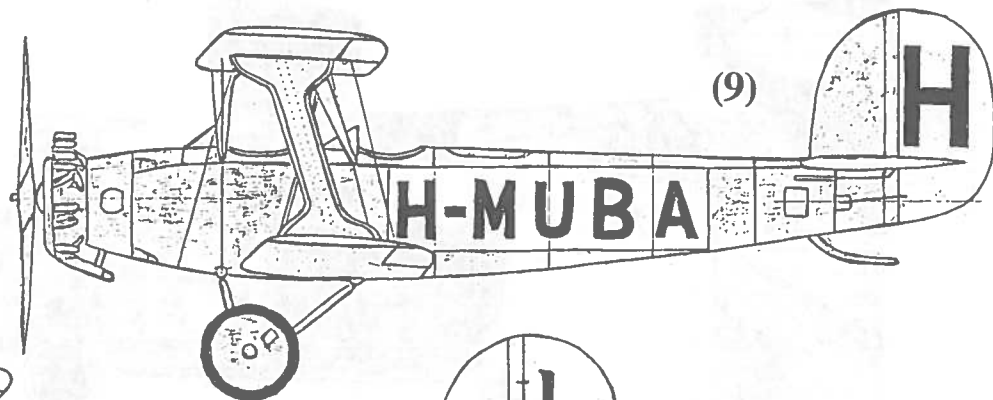
During the visit of the papal legate in the autumn 1990, three 3 Mi-8S helicopters was detached for his use. A temporary chevron-like roundel was painted on these a/c, in the normal positions on the fuselage and the belly (56)(58). These helicopters were also used for liaison purposes at the time of the first independent elections. In the newspapers, the return of the chevron was officially announced, however, nothing more appeared on the a/c. These helicopters were also used during the taxi drivers' blockade in 1990, and temporary insignia were visible also on the tail of a MiG-21PFM photographed at the Papa AB (57).

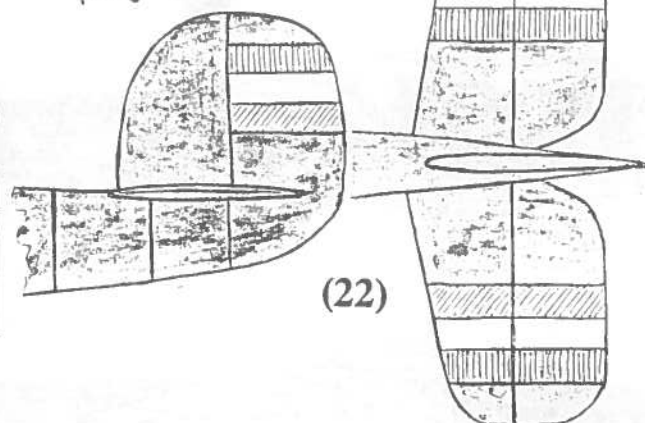
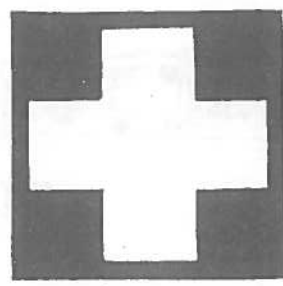
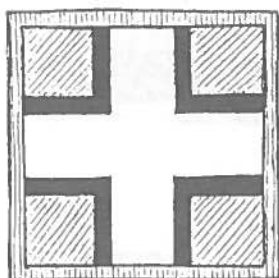
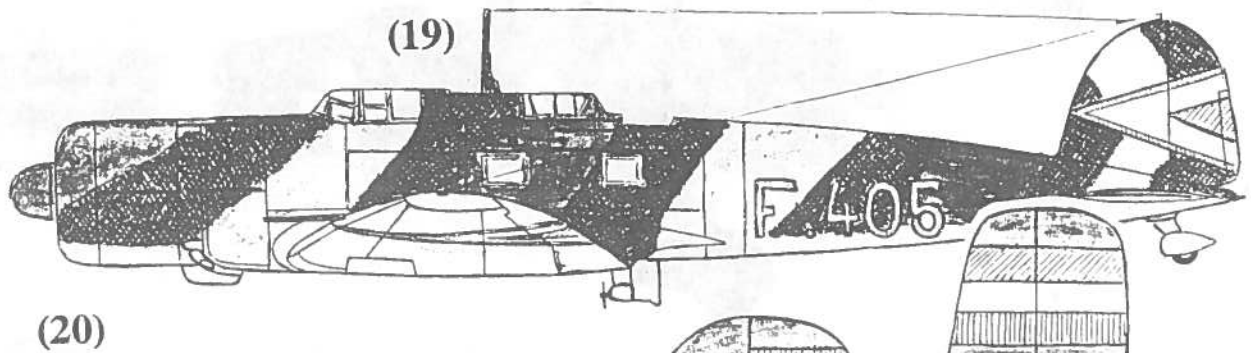
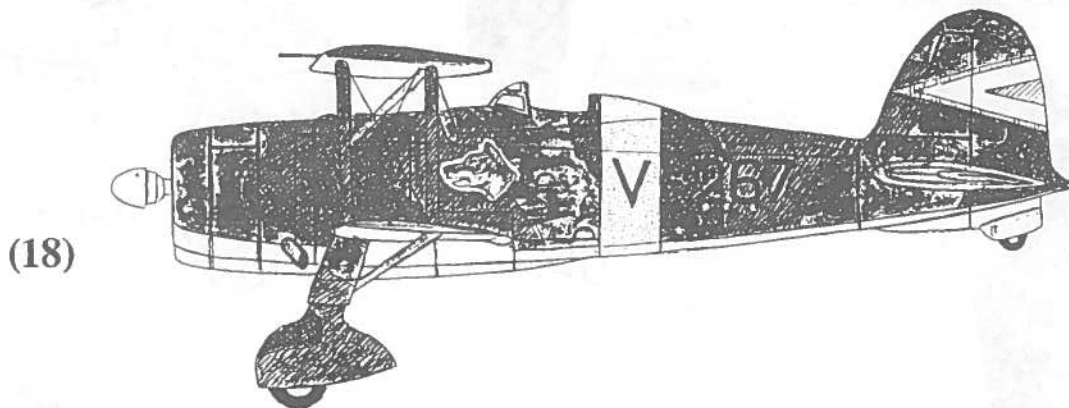
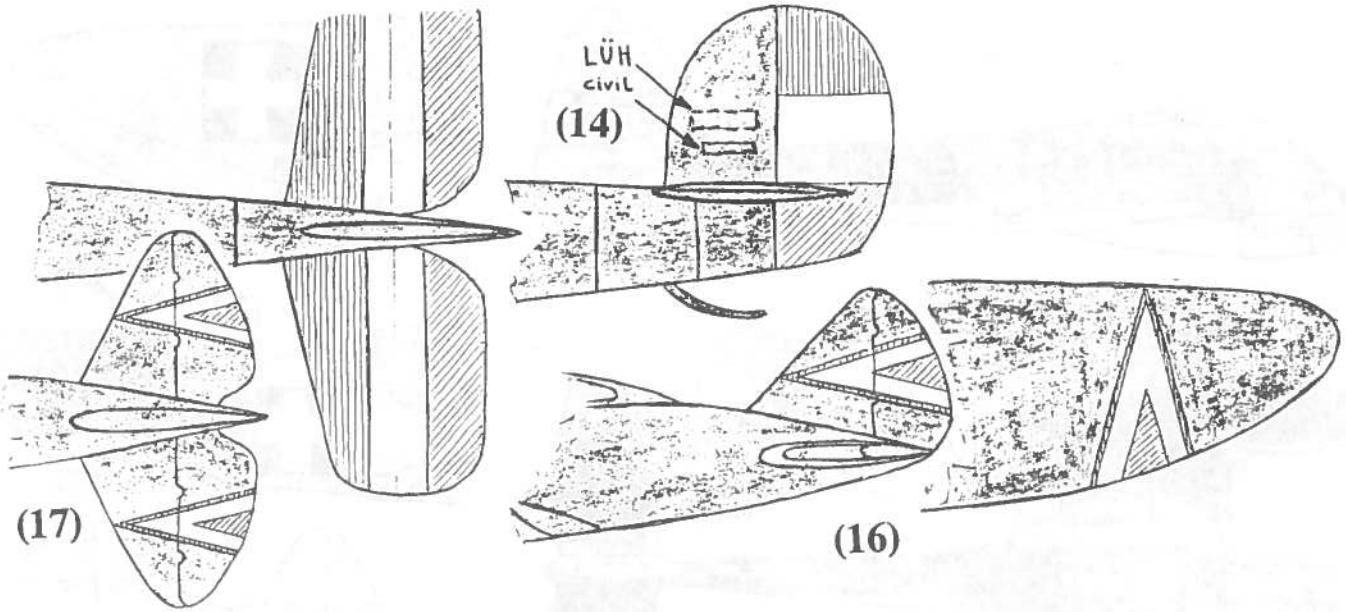
The long overdue break with the red star and the reinstallation of a more national insignia finally occurred at the beginning of 1991 with master patterns to be prepared by 31 January 1991 and painting to be finished by 31 March 1991. The form and the position of the new insignia were regulated by the Chief AF Commander's order (no 12/1991). The new insignia is in the form of a triangle, containing the national tricolor and with a one-cm white border. The height of the triangle is two times the base. Along its sides, there are red and white strips of the width 1/6th the triangle's base. The remaining area of the triangle is green. The height of the triangle (without white border) is 800 mm. These insignia are painted on particular a/c types, in places specified by the decree, in such a way, that the vertex of the triangle points toward the direction of flight and the axis of the triangle is parallel to the longitudinal axis of the a/c. Insignia are painted on the upper and lower surfaces of the wings. On the a/c with adjustable wing angle the insignia are painted in 45° wing position in case of Mig-23 and in 63° wing position in case of Su-22.

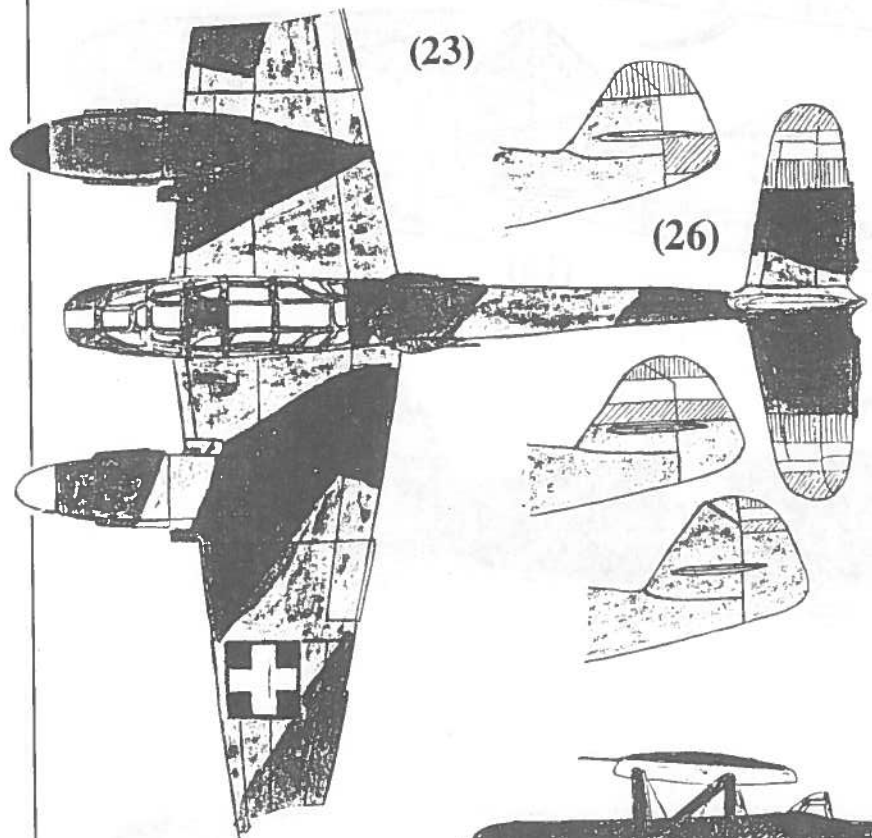
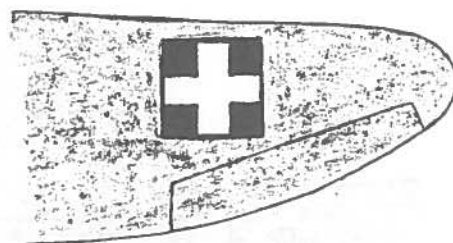
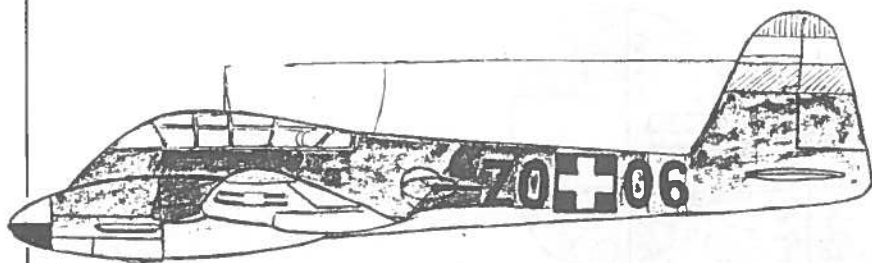
Tadeusz P. Dobrowiecki (SAFCH #948), Somloi Ut 37/1 II/6, H-1118 Budapest, Hungary.



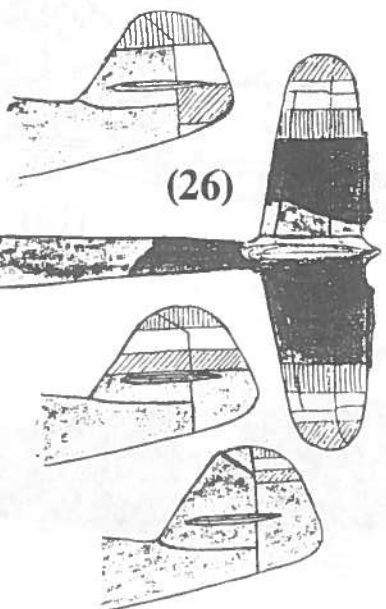




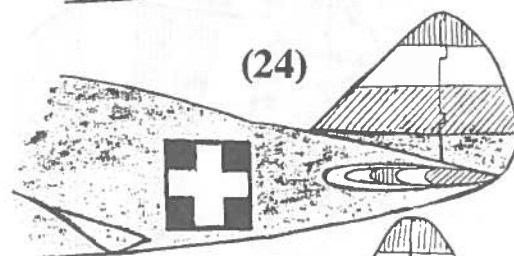




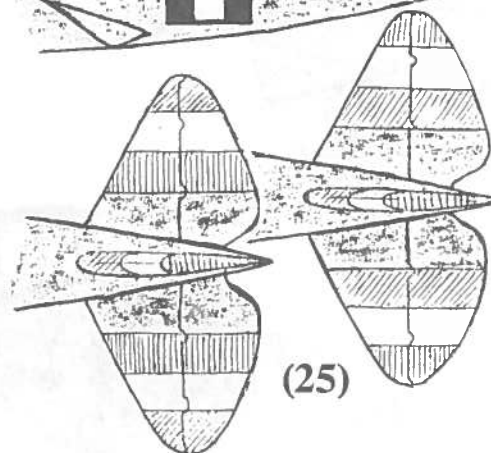
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(26)

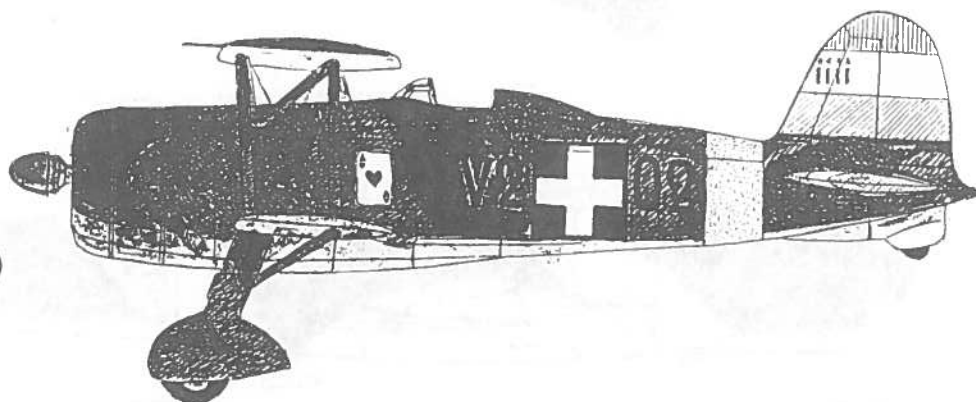


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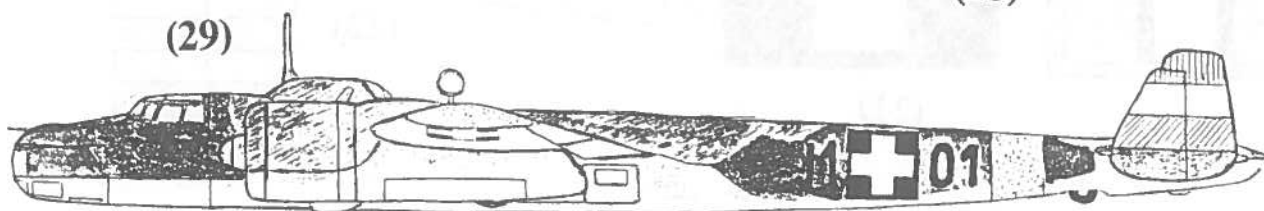


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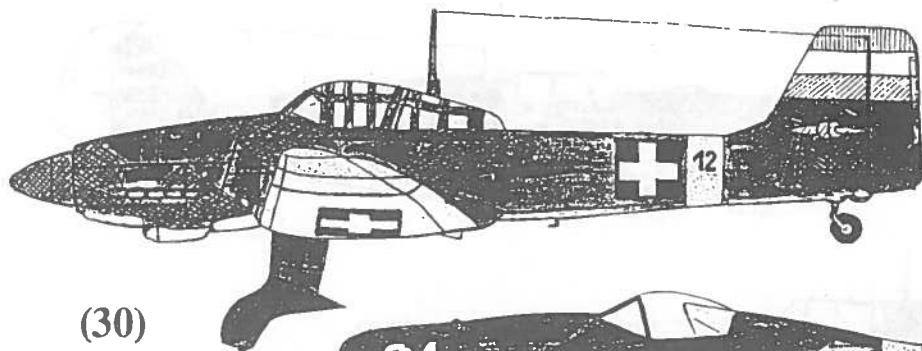
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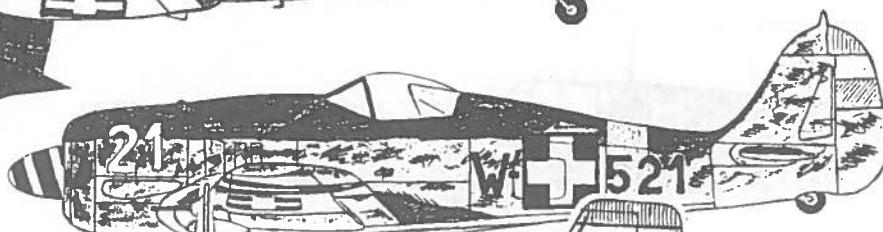
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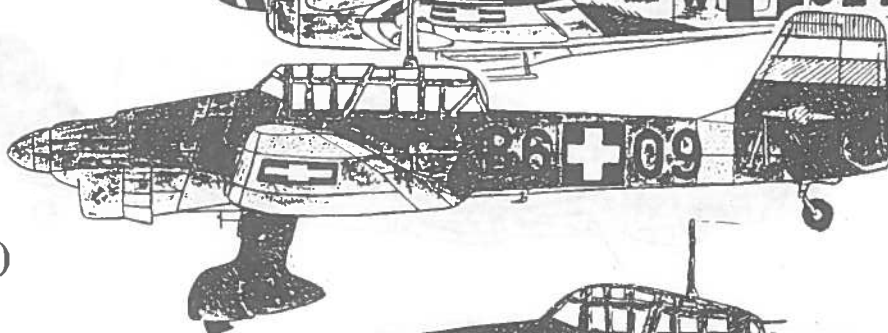
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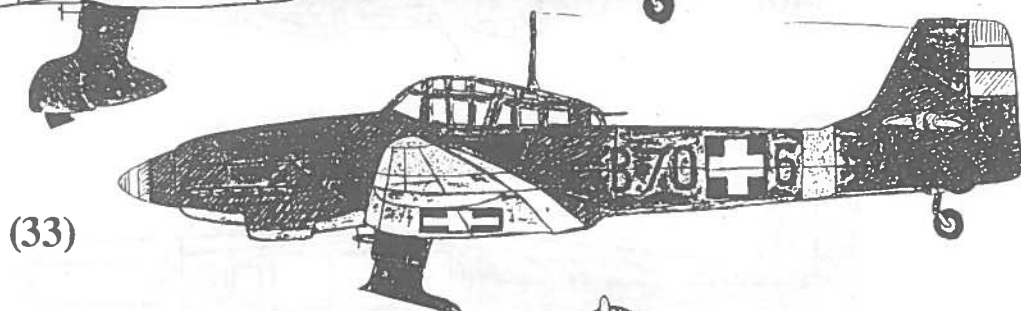
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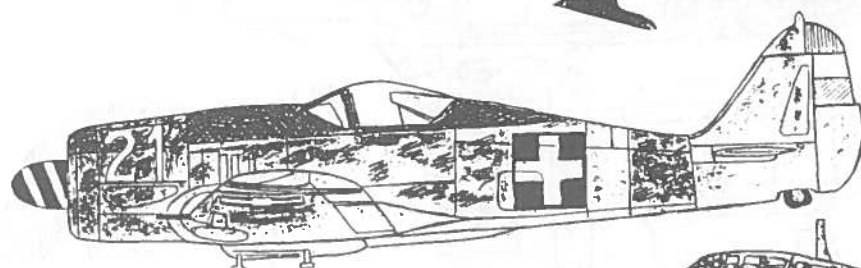
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(32)

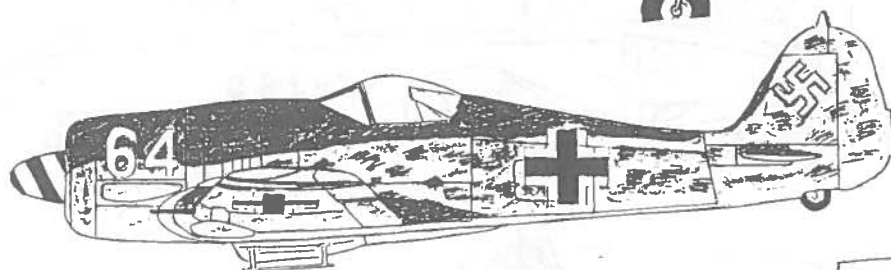
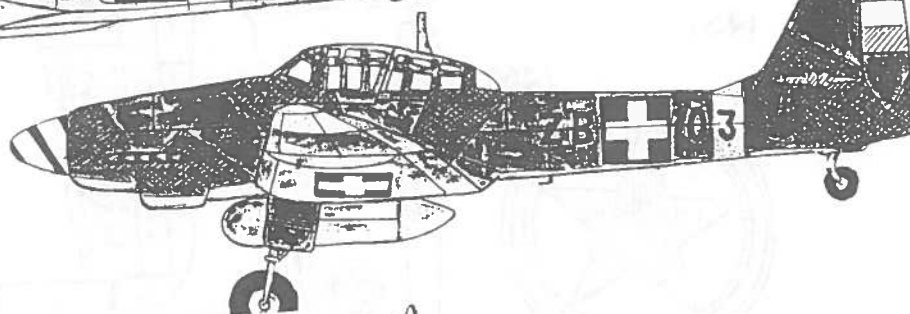


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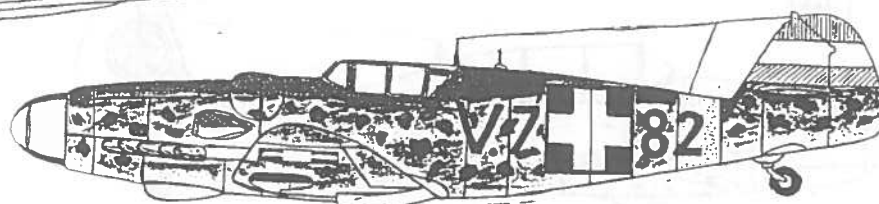
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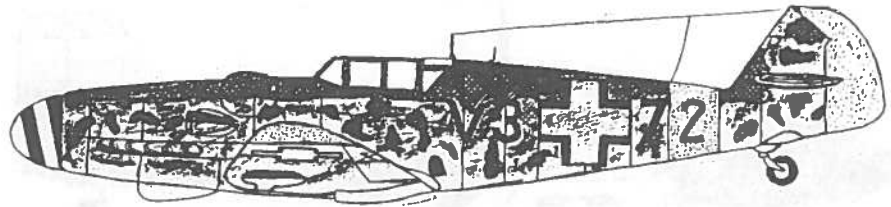


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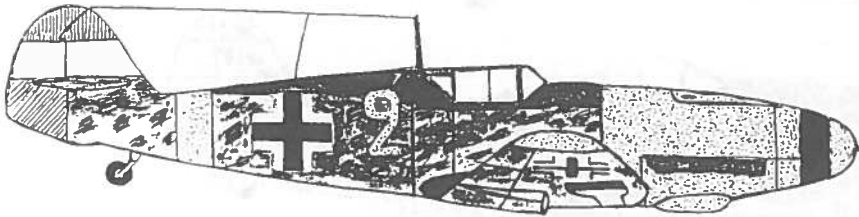
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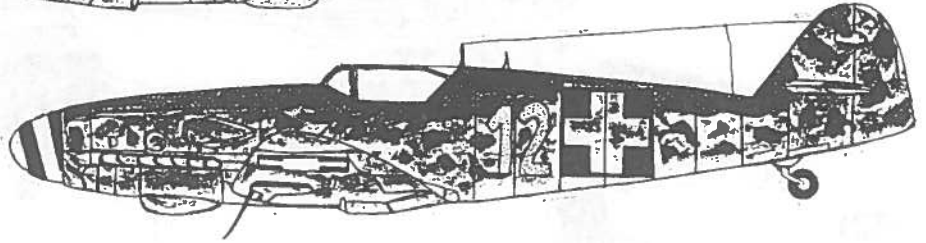
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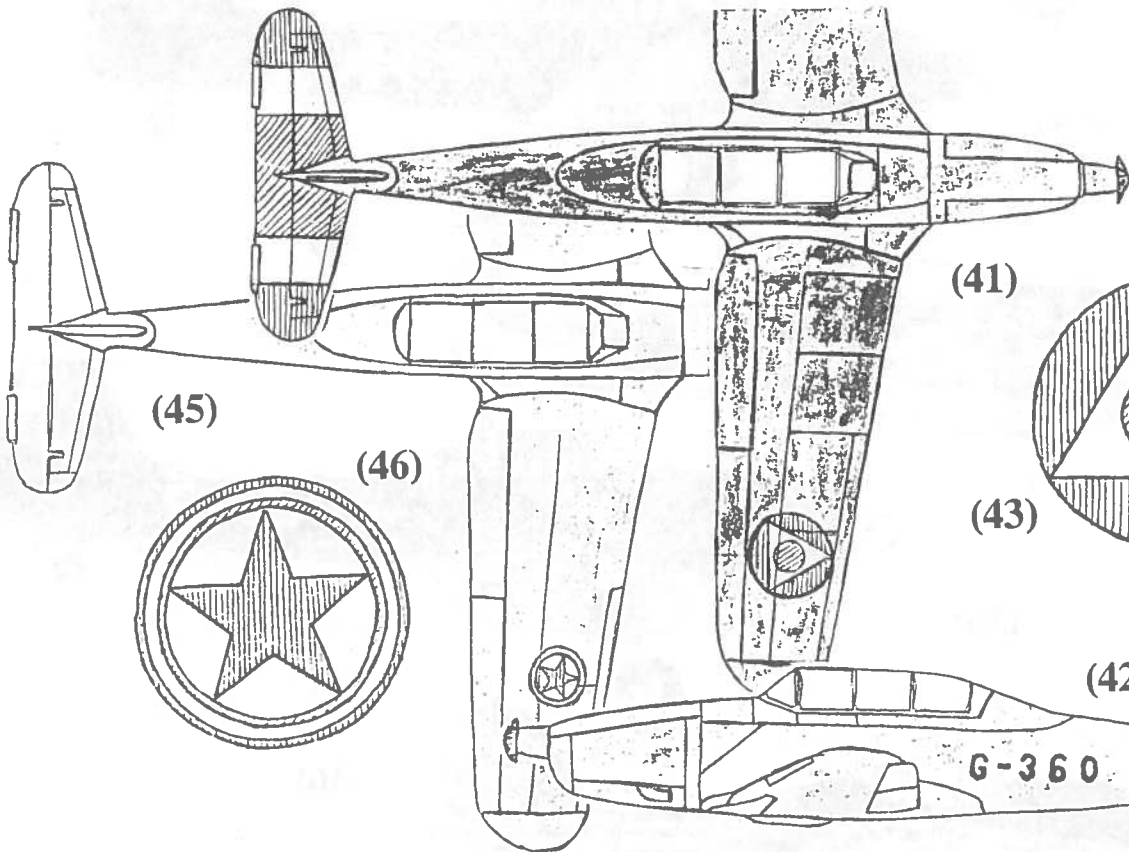
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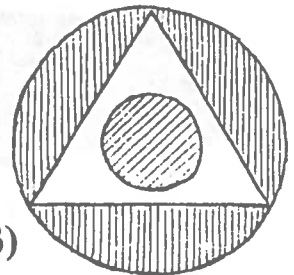
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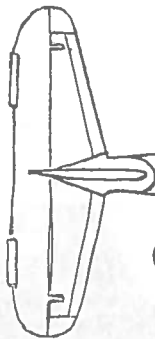
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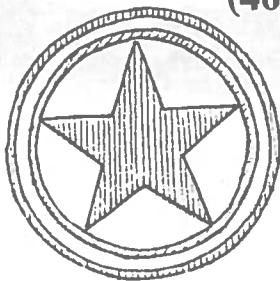
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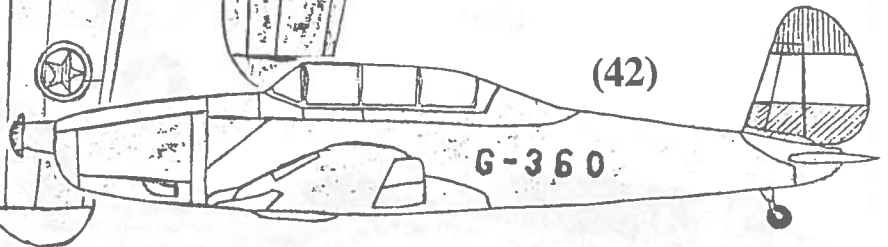
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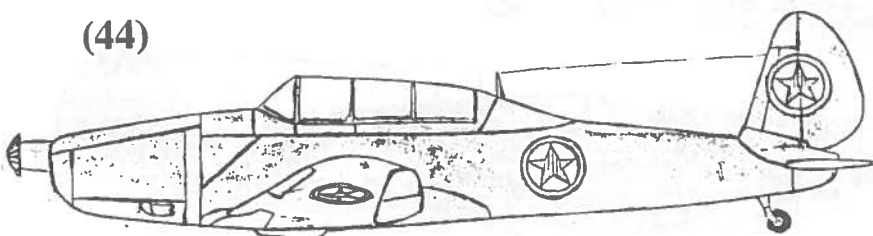
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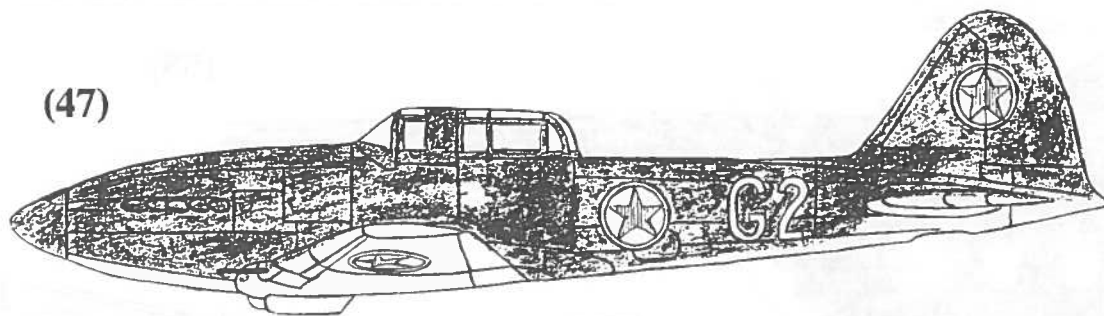
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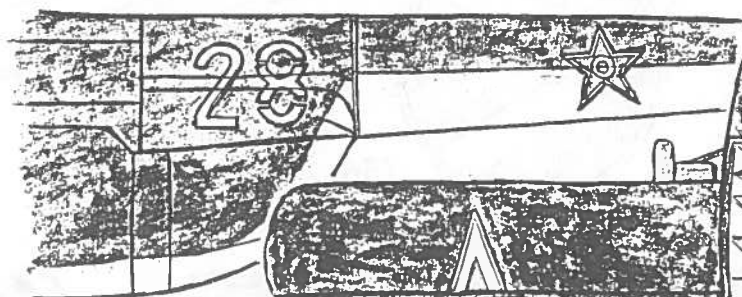
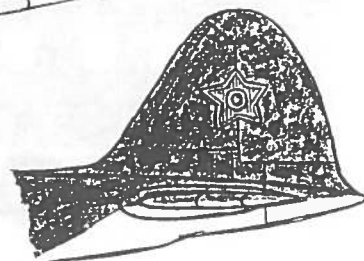
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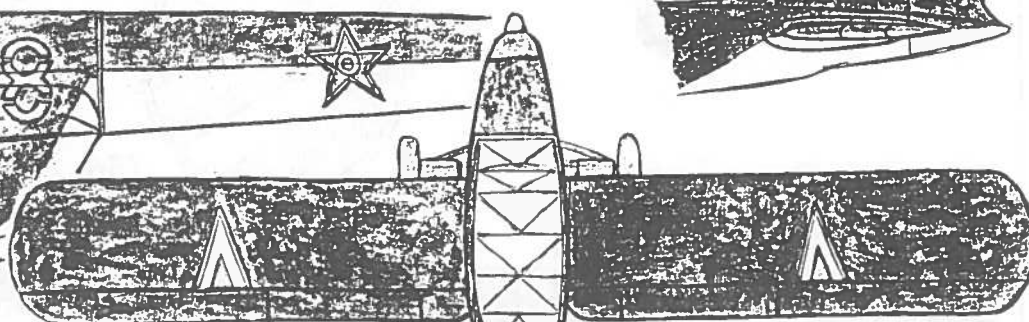
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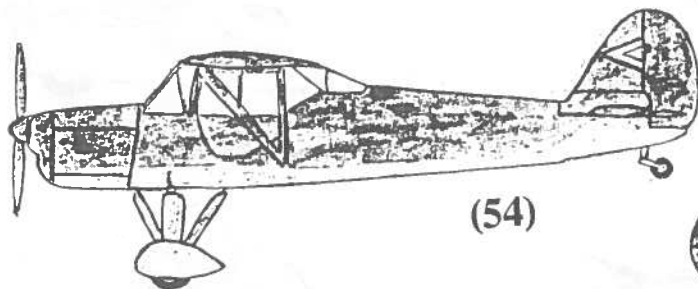
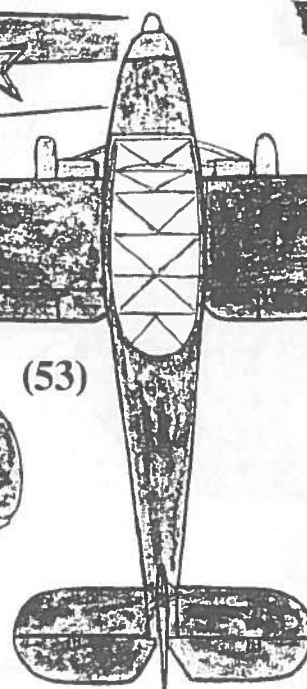
(48)



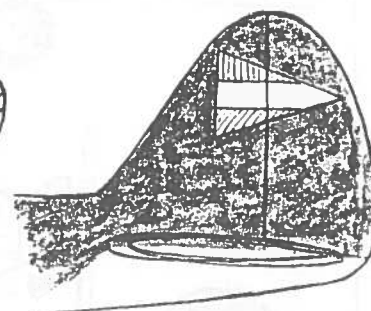
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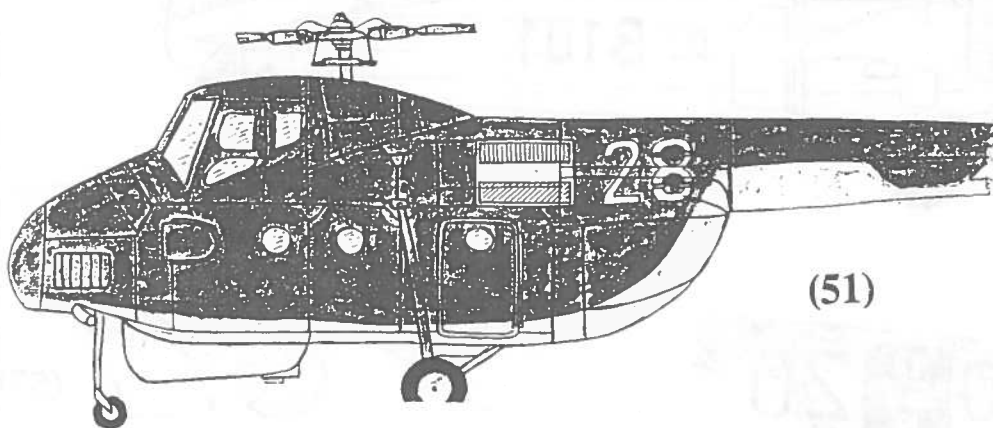
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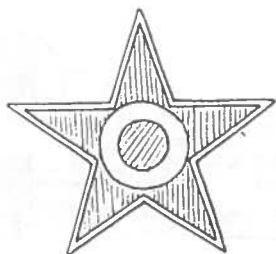
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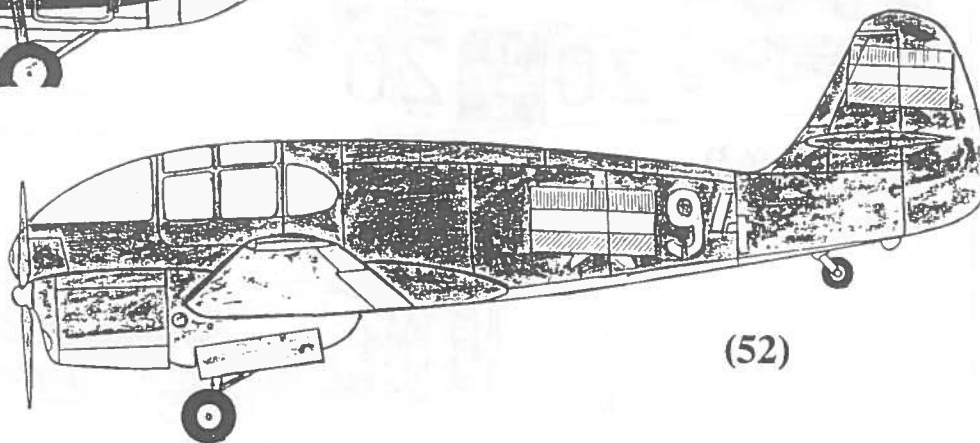
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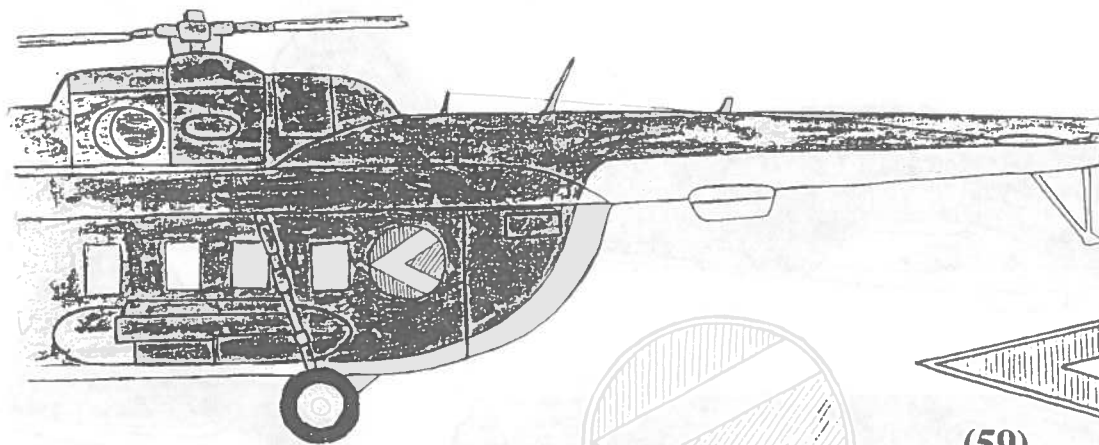
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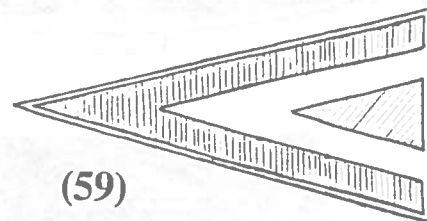
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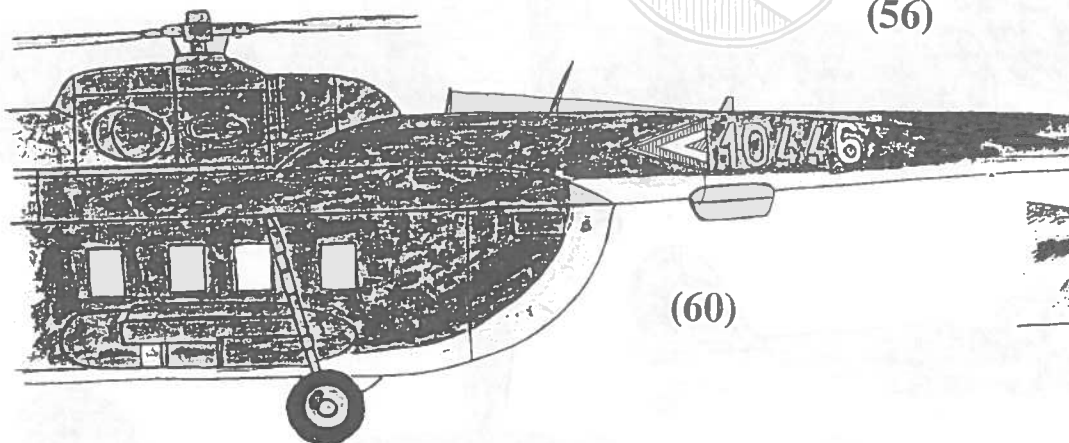
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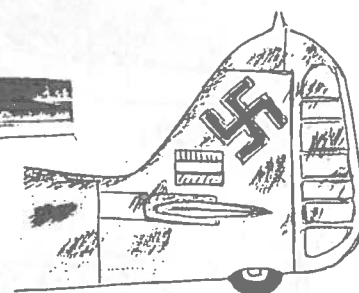
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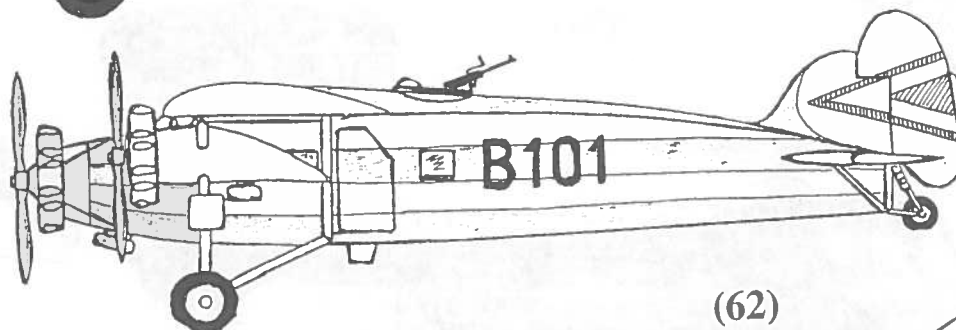
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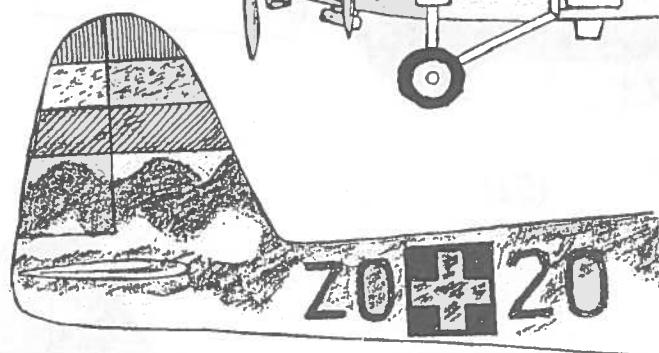
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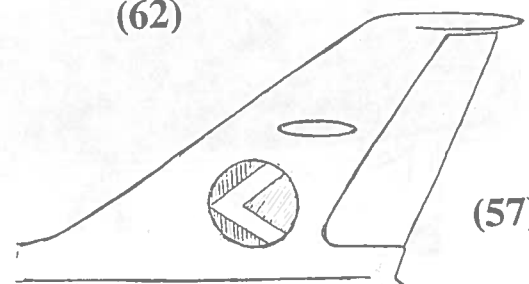
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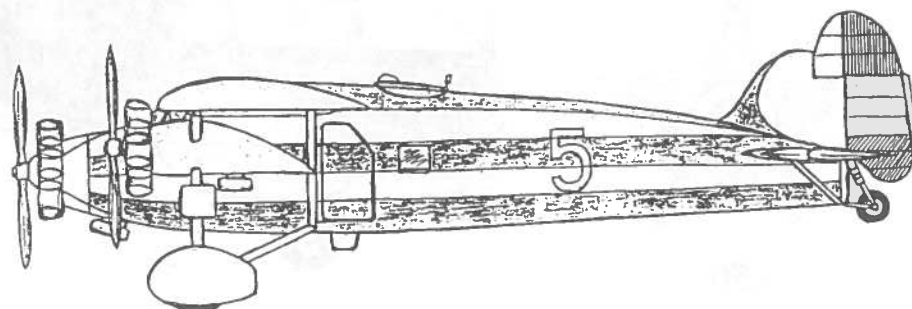
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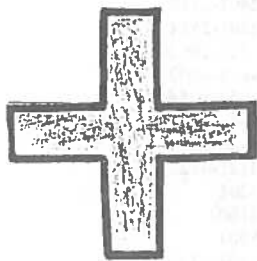
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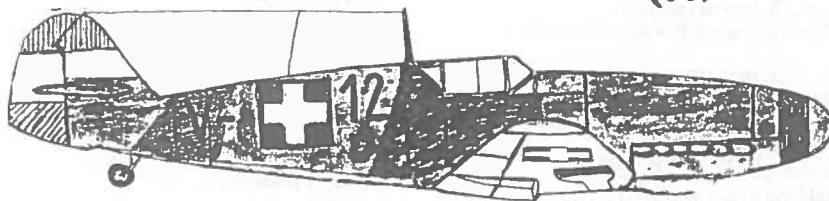
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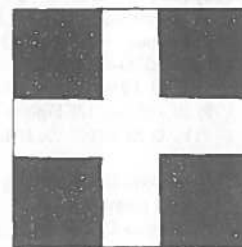
(65)



(64)



(66)



(67)

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- [1] Flying Colors, W.Green, G.Swanborough, Salamander Ltd., 1981
 - [2] A magyar repülés története (The history of the Hungarian aviation), N.Csanádi, S.Nagyvárad, L.Winkler, Műszaki Könyvkiadó, Budapest, 1977
 - [3] Fejezetek a magyar katonai repülés történetéből (Chapters from the history of the Hungarian military aviation), N.Csanádi, S.Nagyvárad, L.Winkler, Zrinyi Kiadó, Budapest, 1986
 - [4] Légi háború Magyarország felett (Air combat over Hungary), Vol II, I.I.Pataky, L.Rozsos, Gy.Sárhidai, Zrinyi Kiadó, Budapest, 1988
 - [5] A Magyar Királyi Honvédség Fegyverzete (The armament of the Royal Hung. Armed Forces), A.Bonhardt, Gy.Sárhidai, L.Winkler, Zrinyi Kiadó, Budapest, 1993
 - [6] Die k.u.k. Seeflieger. Chronik und Dokumentation der österreichischen-ungarischen Marineluftwaffe 1911-1918, P.Schupita, Bernard & Graefe Verlag, Koblenz 1983
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 - [8] Messerschmitt Bf 109G-K, Makettstudió, Vol 2, T.Péchy, PÉTA Kiadó, 1992
 - [9] Messerschmitt Bf 109 in action, Part 2, Aircraft Number 57, J.R.Beamon, Jr., Squadron/Signal Publications
 - [10] Horrido, Légicsaták a Keleti Fronton (Horrido, Air Combat on the Eastern Front), D.Bernád, P.Mujzer, J.Hangya, OMIKK Budapest, 1993
 - [11] Histoire de la Luftwaffe, T.Wood, B.Gunston, Elsevier Séquoia, 1978
 - [12] Aero História (Aero History), Budapest, June 1990, Dec 1990
 - [13] Repülés (Flying), Budapest, 7/84, 1/85, 12/85, 2/86
 - [14] Magyar Szárnyak (Hungarian Wings), Budapest, 3/1938, 8/1942
 - [15] Magyar Szárnyak (Hungarian Wings), Hung. Aero Museum, Oshawa, Ontario, 1983
 - [16] Hadi Technika (Military Technics), Budapest, 4/1992, 2/1993, 2/1994
 - [17] Scale Models, Nov 1981
 - [18] SAFO, nr 63 (1992), 70, 71 (1994)
 - [19] Air Action nr. 33, 34
- also the materials of the RHAf Museum, Oshawa, Canada, on exhibition in the Hungarian Military Museum, Budapest, and personal communication from P. Mujzer, L. Jávör and F. Zsák.

Photos (from L. Jávör and F. Zsák, via author):

- a. Bristol F 2B, civil reg. H-MAED
- b. WM Udet U 12/b (108 HP motor), civil reg. H-MUBA
- c. WM HD22, LÜH nr 1208, civil reg. HA-PHG, 3/5 "Bomber Mattyi" Bomber Sqn, Pápa (secret AF)
- d. Fokker CVD, exercise "Sólyom", 1932
- e. He46E, "Somogyi Pocket Knife" III. Close Recon Sqn, Kaposvár
- f. Fw-56, nr G-142, 1/5 "Humble-bee" Fighter Sqn
- g. He-46EU, nr F-317
- h. SM 75, nr E-101, 2nd Airborne Transport Sqn, Pápa. Crashed after the start with the airborne troops on Apr 12, 1941, Veszprém
- i. Ju-86K-2, nr B-348
- j. RHAf Bf 109, from a wartime Messerschmitt calendar
- k. Me-210Ca-1, nr Z-015
- l. Me-108B, nr G-355, liaison a/c
- m. Ca 135bis, nr B-529
- n. WM Héja, nr V-471, factory picture
- o. Fw-190 F-8 from 102. Fighter Bomber Group
- p. Fi-156 "Gólya" (Stork), nr G-008, 1948
- q. Zlin Z 381 "Fecske" (Swallow), 1949
- r. Zlin Z 381 "Fecske" (Swallow), 1952
- s. Il-10 "Párduc" (Leopard)

- t. Mi-4A, 1956, Budaörs
- u. MiG-21bis, Taszár AB, 1992
- v. Mi-24V, Airshow, Taszár AB, 1992
- w. MiG-29UB, The very 1st a/c landed at Kecskemét AB, during the transfer of the a/c from the Russians on Oct 15, 1993. It was immediately "taken over" with a pre-prepared chevron transparency (tail only).
- x. MiG-29, Kecskemét AB, 1994

Figure captions (based on photo - P, text - T, drawing- D):

- (1) Oefflag-Mickl G, nr G5, Pola, July 1916 (P)
- (2) Aviatik Berg DI, nr 348.48, 1919 (P)
- (3-4) Light bomber UFAG CI, Home Army AF, civil reg. H-EC 5, 1920 (P)
- (5) UFAG CI fast recon a/c (P)
- (6) Phönix CI two scatter recon, 3. Red Air Sqn, May 1919 (P)
- (7) WM Fokker CVD, "Csaba" exercise, 1931 (T)
- (8) Bánhidi-Lampich BL 5, civil reg. H-MAFH, school a/c at MSrE (P)
- (9) WM Udet U-12b, civil reg. H-MUBA (P)
- (10) Udet U-12a, Government Pilot School, Szombathely, late 20's (P)
- (11) Desant trainer "Cimbora" (Pal), nr 503, Pápa 1941 (P)
- (12) Fiat Cr 32, (prob. civil reg. HA-AOA, LÜH nr 3376, and an old Italian nr N 326), 1/5 "Humble-Bee" Sqn, 1936-1937 Kecskemét (P)
- (13) WM Fokker CVD ("N" struts instead of "V"), "Sólyom" exercise, autumn 1932 (P)
- (14) Regulation 1937, the place of the LÜH serials and the civil registration (T)
- (15) Tail of WM HD-22, LÜH nr 1208, civil reg. HA-PHG (P)
- (16-17) Chevron insignia, 1938 (T)
- (18) Fiat Cr-42, nr V-267, 2/3 "Ricsi" Fighter Sqn, asp. Kázár, Kolozsvár 1941. The stars (under serials) are painted in place of the bullet hits. (P)
- (19) He-70K, nr F-405, 1/1 Long-Distance Recon Sqn, 1940, Kecskemét, register number in red (D)
- (20) General Staff proposal, 1941 (T)
- (21) AF Command proposal, 1941 and approved insignia, 1942 (T)
- (22) Proposal, 1941 (T)
- (23) Me-210Da-0 (recon a/c, development of Ca-1), nr Z-006, 102/3 Fast Bomber Sqn, RKI (Flying Research Institute), Feriegy (D)
- (24) Cross insignia, 1942 (T)
- (25) Misunderstood 1942 regulation (T)
- (26) Various versions of the tail tricolor (P,D)
- (27) Fiat Cr 42, nr V-202, 1/3 Fighter Sqn. Note victory markings on the tail (a star and a rectangle with the place & date) (D)
- (28) Do-215B-4, nr F-751, 1/1 Long-Distance Recon Sqn, Sept 1942, Ilovskoje (D)
- (29) Do-17Ka-3 long-distance recon a/c, nr J-101, 1. Independent Recon Group, 1/1 Sqn, May 1942, Ilovskoje. Yugoslavian built a/c, forced landed and captured on Apr 10, 1941. Introduced into service. (D)
- (30) Ju-87D-3, 2/2 Bomber Sqn, July 1943 (D)
- (31) Fw-190F-8, nr W-521, 102/1. "Pavian" Fighter-Bomber Sqn, capr-chef S.Horváth, Jan 1945, Kemenesszentpéter (D)
- (32) Ju-87B-2, nr B-609, Dive-Bomber Trainig Unit, Veszprém, 1942-1944 (D)
- (33) Ju-87D-5, nr B-706, 102/1. Diver-Bomber Sqn, June 1944, Sgt. J. Horváth (D)
- (34) Fw-190F-8, 102/1. "Pavian" Fighter-Bomber Sqn, capr-chef S.Horváth, Jan 1945 (D)
- (35) Ju-87D-5, nr ZB-03. B-703(?) series a/c from the 102/2, taken over with change of series by the 102/1. Dive-Bomber Trainig Sqn, May 1943, Briansk (D)

- (36) Fw-190F-8, nr W-564, 102/2. "Puli" Fighter-Bomber Sqn (D)
 (37) Bf 109G-6, nr V-782, 101/1. Fighter Sqn, capt. Gy.Ujszászy, Szolnok, Mar 1944 (D)
 (38) Bf 109G-6, nr V-371, 5/2 Fighter Sqn, capr-chef S. Tanács, winter 1943-1944, Eastern Front (D)
 (39) Bf 109F-4, 1/1 Fighter Sqn, 1942, Stalingrad Front (D)
 (40) FAG Bf 109G-10, 101/9. Fighter Sqn, capt. I. Békássy, Feb 1945 (D)
 (41-42) Avia C-2 (Ar96), nr G-360, 1948-1949 (D)
 (43) First postwar insignia, 1948 (T)
 (44-45) Avia C-2 (Ar96A), preliminary star insignia, 1949-1950 (D)
 (46) Preliminary star insignia, 1949-1950 (T)
 (47) Ull-10 "Párduc" (Leopard), star insignia 1949-1950 (D)
 (48) Tail of an Il-10 with an unusual form of star insignia (P)
 (49) Mi-4A from (51), before Oct 1956 (P)
 (50) Star insignia, final form, 1952-1991 (T)
 (51) Mi-4A, Oct 1956 (P)
 (52) Aero 45 "Kócsag" (Egret), Oct 1956 (P)
 (53-54) Daru II, Oct 1956 (P)
 (55) Tail of Jak-11 "Ólyv" (Buzzard), Oct 1956 (P)
 (56) Temp. insignia, autumn 1990 (P)
 (57) Tail of MiG-21PFM, Depot Pápa AB, 1992 (P)
 (58) Mi-8S, Oct 1990 (P)
 (59) Present insignia, spring March 1991 (T)
 (60) Mi-8S, present (P)
 (61) Ca.101/3m from the XX or CX postal sqn (clandestine bomber sqns) with painted formation number. LÜH and civil registration unknown, 1936. Ca.101/3m had been delivered with a colorful white-steelblue scheme, which was left on the a/c. (P)
 (62) CA.101/3m, nr B-101, after issuing military serials in 1938. Their original civil colors were left until the maintenance. (P)
 (63) Low visibility RHAF cross from an overpainted German one (P)
 (64) The tail of the Fw 190 of Lieutenant László Szénássy, Experiment Jagdgruppe / J.G. 11, Hannover- Celle, Oct 1944, (D)
 (65) Low visibility markings on Me 210, nr Z-020
 (66) Bf 109F-4B, nr V-012, from Bánlaki sqn, Jan 1943, under direct Luftwaffe command. (P)
 (67) Slightly different cross on Fw 189 and some Bf 109 (P)

Camouflage notes

- Ju 87, Fig.(32): Brown (RML26) and Dark Green (RML71) splinter, with Light Gray (RML75)
 Ju 87, Fig.(30,35,33): Black Green (RML70) and Green (RML71) splinter with Light Blue (RML76)
 Fw 190F-8, Fig.(31,34): Gray (RML02) and Black Green (RML70) splinter, Gray mottle, with Light Blue (RML76)
 He-70K, Fig.(19): Green (RML71) and Brown (RML26) splinter, with Light Gray (RML75), registration in Red
 Me 210Da-O, Fig.(23): Black Green (RML70) and Light Grey (RML75) splinter, with Light Blue (RML76)
 Do-215B-4, Fig.(28): Green (RML72) and Dark Green (RML73) splinter, with Light Blue (RML76)
 Do-17Ka-3, Fig.(29): Green (RML72), Brown (RML26) and Gray (RML77) splinter, with Light Blue (RML76)
 Bf 109F & G: Dark Gray (RML74), Gray (RML75) and Light Blue (ML76) splinter, Gray mottle, with Light Blue
 Fig. (39): Yellow motor cover,
 Fig. (40): Dark Green and Light Gray splinter, with Light Blue. Number in silver
 Fiat Cr-42 Green, Stone Gray and Dark Earth, with Light Gray

Aerial Office (LÜH) serials (1924-1938)

Oravec-Szebeny	001-
Oravec I.	011
Oravec II.	021-024
Brandenburg BI	051-
Bristol School	201-205
Lóczy Hungária	101-140
Udet U12 (85LE)	301-305
WM-Udet U12/b	351-391
Junkers A50 Junior	401-403
WM-10/13	421-429
Bü 131 Jungmann	501-570
Ju A20	1051
Ju A35	1101
Dutch Fokker C.V.	1151-1159
WM-Fokker C.V.-E. (prot)	2201
WM-Fokker C.V.-D.	2202-2250
WM-16 Budapest A (dev. of C.V.E)	12101-12109
WM-Fokker C.V.E	2101-2109
WM-21 Sólyom (first WM series)	12121-12133

He.46/E	13101-13136
He.70/K	2401-2418
Ro-37bis	2501-2514
Ju 86/K	2601-2602
Fokker FVII	4001-4002
Fokker FVIII	4051-4054
Fokker FXI Univ.	4021-4022
Caproni Ca.97	4101-4104
Ca.101/Bi	4121-4122
Ju F13/efg	4201
Ju 52/3mg	41001
Fiat BR 3	5001
Ca.101/3m	5101-5115
WM-16 Budapest B	5201-5209
Ju 86/K	5301-5363
Ca.310 Libeccio	5401-5435
Fokker DVII (dev. Sóstó)	3001-3004
Fokker DXVI	3011-3014
Fiat Cr-20, 20B	3031-3032
Fiat Cr-20/bis	3101-3116
Fiat Cr-30/B (double seatter)	3061-3068
AVIS (dev. Sóstó)	3201-3206
Fiat Cr-32/bis	3301-3376
Fiat Cr-32/Ter (ex Austrian)	13301-13336
WM-Heinkel HD-22	1201-1230
Fokker C.V.-D. (dev. Sóstó)	12201-12215
WM-20 (improved HD-22)	11250
Heinkel He.45	1301-1306
Romeo Ro-41, 41/B (double seatter)	1351-1358
Fw-56 Stösser	1401-1432
Fw-58 Weihe	1501-1572
Bf-108/B Taifun	1601-1607
Do-23	1701-1703

RHAF a/c - civil reg. and serials (1920-1945)

H-A.A.1-	4	Aviatik Berg D.I.	f
H-AF.1-	2	Fokker D.VI	f
H-EB.1-	2	Brandenburg C.I.	r
H-EB.3 (I. H-MADA)	1	Brandenburg C.I.	b
H-EC.1-	3	UFAG C.I.	r, l
H-EC.4-	2	UFAG C.I.	lb
H-J.30-	15	Brandenburg B.I	.s
H-J.101-	6	Phonix C.I.	r, p
(without armour H-OP.1-)			
H-MAAL, -MAAK	2	Oravec II	r
H-MAEA-F	6	Bristol F 2B Fighte	r
H-MAIA	1	Junkers A.20	r
H-MAJA	1	Junkers A.35	r
H-MPFA-H	8	Fokker CVD	r
H-MFJA, -MFJW			
-MFHA	50	WM Fokker CVD	r (I. F.101-)
H-MEJA-EJW	2	WM-Fokker CVE	ldr
HA-FKA-B	2	Fokker F-VII	sa, l
HA-XCA-XCG	7	Bf-108B Tajfun	r t, l (G.351-7)
HA-JAD	1	Junkers F-13/de(632)	tr, t
HA-FNB, -FND	3	Fokker F-VIII	l, sa
HA-FUA, -B	2	Fokker F-XI Universal	to, l
HA-ALD, -G	4	Ca-97	to, l
HA-XBG	1	Fw-58C	AF CO I
HA-SMA-E	5	SM-75	tr (E.101-)
H-MFOA-	4	Fokker D.VII	f (HA-FOA)
H-MAGS-	4	Fokker D.XVI	f (HA-AGS)
H-MALJ, -K	2	Ansaldo A.C-3	f t
H-MAPP	1	FIAT CR-20	f t
H-MAPQ	1	FIAT CR-20B (2s)	f t
HA-AZA-	16	FIAT CR-20bis	lb
HA-AAF	1	FIAT BR-3	lb
H-MAMA, -B	2	Ca-101/Bi (HA-AMA, -B)	b
HA-SAA-	9	WM-16 Budapest	lb (B.201-)
HA-AMG, -AMO,	9	Ca-101/3m	nb (B.101-)
+BCL, +BME			
HA-JBA, -JCA	63	Ju-86K-2	b -XIA, etc.
HA-LAA, -LBA	105	Bü 131	s (I.151-)
HA-JAA-	3	Junkers A-50 Junior	h, t
HA-AKA-	10	WM-10/13	s
H-MAAA, -C	2	Szebeny-Oravec	s
H-MAAB	1	Oravec I	s
H-MAAG, -J	4	Oravec II	s
a-e	5	U 12/a	s
A-E	5	Bristol School	s
H-MAHA, -E	5	Loczy Brandi (KLB)	t

RHAF serials (1938-1945)

F 101-	50	WM Fokker CVD	r
F 102	1	Fokker CVD/U Furrricane	r, wt
F 151-	9	WM-16 Budapest (Budapest 9)	r
F 201-	99	WM-21 S'lyom	cr
F 301-	20	He 46/E-2Un	cr
F 320-	12	He-46/E-2Un	nb
F 401-	18	He 70K (170)	ldr
F 501-	14	Ro 37bis	cr
F 601-	29	WM-21 Solyom	cr
F 701-6 -10	7	He 111P-2, P-4	ldr
F 707-9	3	Do 215B-4	ldr
F 751-7	7	Do 215B-4	ldr
F 801-	12	Bf 109G-8	phr
F 901-	28	Ju-88/D-1	ldr
F 001-	2	Ju-188/H-2	ldr
F 051-	69	Fw 189/A-1, A-2	cr
V 101-	76	Fiat Cr-32	f
V 185-080-	36	FIAT CR-32 Quater (ex Au)	f
V 201-	60	FIAT Cr-42	f
V 260-	12	FIAT CR-42bis	de
V 301-	3	He 112B-0	f
V 310-	84	Bf 109G-2, G-4	f
		(some G-2/R-6 e.g. V.318)	f
V 401-	70	Reggiane Re-2000 Falco	f
V 471-	30	MAVAG Re-2000 Héja	f
V 501	1	WM 23	
V 502-	98	MAVAG Re-2000 Héja	f
V 560	1	MAVAG Re-2000 Héja	pr db
V 602-	2	Bf 109D-1	f
V 605-	72	MAVAG Re-2000 Héja	f
V 670	1	MAVAG Re-2000 Héja	pr db
V 706-	44	MWG Bf 109G	
V 751-65	150	MWG Bf 109G-2, G-4	f
766-899		MWG Bf 109G-6	f
V 901-	50	Bf 109E-4	f
V 951-	6	Bf 110E, G-2	de
V 001-	66	Bf 109F-4/B	f
V 060-	36	Fiat Cr-32 ex Austrian	
W 001-	126	FAG Bf 109G-14	f
101-		FAG Bf 109G-14	f
W 201-	25	FAG Bf 109G-10	f
W 501-	72	Fw 190F-8	fb
Z 006-11	6	Dunai Me-210Da-0	r
Z 005	1	Dunai Me-210Ca-1	nf
Z 008-10	3	Dunai Me-210Ca-1/E	pr
Z 003	1	Dunai Me-210Ca-1	hf pr
Z 001-	160	Dunai Me 210Ca-1	de
M 001	1	EMESE EM-29	l
M 101-	12	BF-110G-4	nf
B 101-	15	Ca-101/3m	nb
B 121-	32	Ju 88A-4 & C-6	b
B 201-	9	WM-16 Budapest (Budapest 14)	lb
B 301-	63	Ju-86/K-2	b
B 401-	35	Ca-310 Libeccio	lb
		(returned to the Italian)	
B 401-	51	Ju-88A-4, A-5	b t
B 408	1	Ca-310 Libeccio	b t
		(remained as pa/c)	
B 451-	2	FIAT Br-20	nb
B 501-	68	Ca-135bis/U	nb
B 601-	14+4	Ju-87B+A	db
B 617-	30	Ju-87D-1, D-3	db
B 701-	14	Ju-87D-5	db
B 701-2	2	He-111P-2	pa/c
B 801-	12	He-111H-6	nb
		(maint. by KG-55, end of 1944)	
ZB 01-	12	Ju-87D-5	db
E 101-	5	SM 75	tr
S 001-	3	Fw 58KI-2 ex MALÉRT	l
S 101-	3	Ju-52/3mg-9e ex MALÉRT	p tr
S 151-	12	FIAT G-12	tr
S 201-	22	Ju 52 ex DIRT	
S 301-	6	Caudron C-630 Simoun	l
S 400-	5	Siebel Si-204D	l

U 201-	23	Ju-52/3mg 14e	ar tr
U 281-2	2	RWD-8	s
U 861-	6	Ju 52/3mg -9e ex MALÉRT	p tr
T 101-	2	Ju 88D	t
T 501-	5	Ju 86	t
T 001-	16	Ar-79B	t
J 101	1	Do 17Ka-3ldr (ex YU)	ldr
J 104	1	Bristol Blenheim	t
L 101-	3	Ju 86K-2	
R 101-	17	Fi-156C-2 Storch	l
	20	Fi-156D-1 Storch	sa
K 001	1	Brandenburg C I	
K 002-	40	Loczy Hungbria	s
K 101-	30	Udet U12/b Flamingo	s
K 201-	12	WM HD-22	t
K 301-	10	REGJU Fokker CVD/K	t
K 321-	30	Fw 58C	
K 330-	17	FW-58C	n de t
I 101-	10	Udet U12	
I 111-	9	WM 10/13	s
I 121-	9	WM HD-22	t
I 131-	5	REGJU Fokker CVD/K	t
I 141-	4	enlisted sport a/c	
I 151-	5	Bü 131a	s
I 161-	30	Bü 131a	s
I 201-	70	Bü 131b	s,l
I 281-	2	RWD-8	
I 283	1	Prága E 39	
I 284-	2	Műgyetem M-24	l
I 301-	5	Káplár	s,l
I 351-	2	Levente I	s
I 401-	100	Bü 131d	s,l
I 501-	50	Bü 131d	
I 551-	50	Levente II	s,l
I 601-	30	Levente II	s,l
I 701-	23	Bü 181 Bestman	s
I 801-	29	enlisted sport a/c	
I 851-2	2	Műgyetem M-24	l
I 901-	6	Caudron C 600 Aiglon	l
I 001	1	Fw-189 double seatter	t
I 001-	60	BŘ 131d	s, l
G 101-	10	FIAT CR-30	f t
	2+5	FIAT AR-30 (double seatter)	f t
G 121-	32	Fw-56 Stosser	f s
G 135	1	WM 20	
G 141-	18	Fw 56	
G 161-	3	Breda-25	s
G 181-	8	Romeo Ro 41 & 41B ft	
G 191	1	PZL P11.a	
G 192	1	Avia B-534	
G 201-2	2	Ca 97, Ca 101/Bi	
G 201-	3	Do 23	b t
G 211-	3	Ju-86K-2	hl ldr
G 221-	80	Fw-58K-7, K-8	b t
G 235-6	2	Fw-58E-1	met r
G 301-	6	He-45C	r t
G 301-	10	Fw 58K-8 Weihe	
G 308-9	2	Ju-86Ga-1	l
G 351-	7	Me-108B Tajfun	ldr t, l
G 401-	40	Ar 96A	t
G 451-	10	Ar 96B	t
G 461	1	Ar 96B (M-V-G)	t
G 501-	25	Ar 96A	
G 601-	12	Nardi F 305	t
G 620-	40	Nardi F 315	t
G 701-	40	Potez 63.11	de t
G 751-	3	NA-16 Harward	t
G 801-	22	Fw 58	
G 901-	35	Ar 96B	t
G 001	1	UT-2	
H 001-	4	Honvéd	s
101-	5	Tűcsök	g t
201-	5	Vöcsök	g t
301-	5	Pilis	g t
401-	5	Kevely	g t
406-7	2	Műgyetem M 22	d g t

408-9	2	Móka	d g t
501-	10	Cimbora	d g t
601	1	DFS 230	tr g s
701-	15	Go 142	tr g t
801-3	3	DFS Kranich	d g t

AFCO -	AF commander a/c	ar - armoured
b - bomber	cr - close recon	d - desant
db - diving bomber	de - destroyer	f - fighter
fb - fighter bomber	hf - heavy fighter	hl - high level
l - liaison	lb - light bomber	ldr - long distance recon
met - meteo recon	nf - night fighter	pa/c - pattern a/c
phr - photo recon	pr - prototype	nb - night bomber
r - recon	s - school	sa - sanitary
t - trainer	to - topological service	
tr - transport	g - glider	wt - workshop transport

Squadron markings from 1930 to 1945.

Owl 1. recon sqn, Fokker C.V.D & E., Heinkel HD-22, Debrecen 1930-1935

Meteo Air Branch (Meteorológiai Repülő Kirendeltség) 2. recon sqn, Bristol F-2B, Fokker C.V.C., Szeged 1930-35

Eagle 3. recon sqn, Fokker C.V.D., Kaposvár 1930-35

Raven 1. close recon sqn, He 46, Mátyásföld 1937-42

Lucifer II. close recon sqn, He 45 and 46, Székesfehérvár 1936-40

Motorized close recon 1. & 2. motorized brigade, WM-21 Solyom, Budaörs and Ungvár 1939-40

Pocket knife from Somogy (Somogyi bicska) III. close recon sqn, He 45 and 46, Kaposvár 1936-40

Red cock IV. close recon sqn, Fokker C.V.D., Pécs 1935-38

Paprika witch V. close recon sqn, WM 21 Solyom, Szeged 1936-40

Horseherd (Csikós) (1) VI. close recon sqn, WM 16A Budapest, Debrecen 1933-40

Jelly frog VII. close recon sqn, Fokker C.V.D., later WM-21 Solyom, Miskolc 1935-40

Hawk IV., later III. close recon sqn, WM-21 Solyom, Szombathely

Goose Matty (Ludas Matyi) (2) VIII., later 4. training close recon sqn, WM-21 Solyom, Ungvár 1938-42

Magic steed 1. and 2. cavalry brigade recon sqn, WM-16 & WM-21, later on the front 3. close recon group, Fw 189, Kecskemét 1939-44

Hawk eye X. close recon sqn of the Quick Army Corps, WM-21, 1940-42

Seven-league boots 1/1 far recon sqn, He 70K, He 111, Ju 86, 88, and 188, Mátyásföld, Kecskemét, Budaörs 1937-45

Stork 1/2 far recon sqn, He 70K, Mátyásföld, Kecskemét 1937-41

Slate 2. recon school sqn, He 45, Ar 96 and Bü 131, Székesfehérvár 1937-42

Bishop 1. liason sqn, Ar 96, Fi 156 and Fw 58, 1941-45

Herald liason sqn of the 102. Army, Fi 156, UT 2, Fw 58, 1941-45

Transport 102/2 MALERT sqn, Ju 52, 102/1 sqn, Budaörs, Veszprém 1941-45

Paratrooper mushroom 2. airborne transp. sqn, SM 75, Pápa 1939-42

Cavalier 1. airborne transport sqn, Ca 101, Pápa 1939-44

Witch 2/1 bomber sqn, Ca 101, later 4. Bomber Group, Ca 135, Ju 88A-4, Szombathely, later Debrecen 1933-45

Black cat 2/2 bomber sqn, Ca 101, Szombathelyi 1933-36

Mace 2/3 bomber sqn, Ju 86, Szombathely 1937-40

Red devil 2/4 light bomber sqn, WM-16B, Ca-310, Ju-86, Szombathely 1935-42

Death 2/5 bomber sqn, Do 23, Ju 86, Szombathely 1935-42

Arrow of God 3/1, later 4/1 bomber sqn, Ju 86, Tapolca 1937-42

Sword of God 3/2, later 4/2 bomber sqn, Ju 86, Tapolca 1937-42

Yellow storm 3/3 bomber sqn, Ju 86, Veszprém 1937-40

Dragon 3/4 bomber sqn, Ju 86, Ca 135, Ca-310, Pápa 1937-39

Bomber Matty (also Goose Matty) (3) 3/5 bomber sqn, Ju 86, Pápa 1937-40

Uz Bence (4) 3/6 bomber sqn, Ca 135, Debrecen 1940-41

Lead the young ! 1. bomber school sqn, Ca 135, Ju 86, Szombathely 1939-44

Eagle 102/1 fast bomber sqn, Me 210Ca-1, Hajdú-böszörmény 1944-45

Tiger 102/2 fast bomber sqn, Me 210Ca-1, Hajdú-böszörmény, Várpalota, Tés 1944-45

Thunderbolt former 102/3 Rkl fast bomber sqn, Me 210Ca-1, Ferihegy, Várpalota 1943-45

Pavian 102/1 diving bomber sqn, Ju 87, Kolozsvár, later on the front: 1943-44 from Oct 17, 1944, Fw 190 F-8, within 102/1 fighter bomber sqn, later group

Puli (5) 102 destroyer sqn, Fw 190 F-8, Páli, Börgönd 1945, 102/1; /2; /3 sqn from Jan 7, 1945 untill May 8, 1945

Turul (6) 1. Fighter Wing, Fokker D VII and D XVI, Székesfehérvár 1930-34

Archer 1/1 fighter sqn, Fiat CR 20bis and CR 32, Szombathely, later Börgönd 1935-41

Goose Matty (7) 1/2 fighter sqn, CR 32 and Fw 56, Börgönd 1936-41, in 1941, on the front on Héja (Re 2000) group

Cougar 1/3, later 2/2 fighter sqn CR 32 és Héja, later from 1943, Bf 109, later group marking of the 101 Home Defence Group

Heart ace 1/6, later 1/3 fighter sqn, CR 32 & CR 42, Kecskemét, later Mátyásföld 1936-42

Humble-bee 1/5 fighter sqn, CR 32, 1/1 fighter sqn, Héja, Kecskemét, Szolnok 1936-44

Camel 1/4 fighter sqn, CR 32, Kecskemét, Mátyásföld 1936-40

St George later 1/4 fighter sqn, CR 42, Mátyásföld 1940-43

Teddy bear 2/1 fighter sqn, CR-32, Nyíregy-háza 1938-40

Arrow 2/4 fighter sqn, CR 42, Kolozsvár 1940-43

Ricsi (8) 2/3 fighter sqn, CR 42, Kolozsvár 1940-43, Héja M

Owl 5/1 experim. night fighter sqn, Fw-58, Héja, Me 210Ca-1, and Bf 110, later 102/1 night fighter sqn, Csorna 1944-45

Cross-spider 2/4 fighter sqn, Héja, Kolozsvár 1941-44

Ricsi 102. Fighter Group, Bf 109G, Kolozsvár 1944, later at front as 101/8 sqn 1944-45

Diamond ace 101/7 fighter sqn, Bf 109G-6, G-10, 1944-45

Frog Home Defence 101/9 fighter sqn, Bf 109 G-10, Veszprém 1945

(1) from the Hungarian Lowlands
 (2,3,4,7) smart boys from the Hungarian folk tales
 (5) Hungarian shepherd dog
 (6) mythical bird of the Hungarians
 (8) CO dog's name

Hungarian People's Army Air Force serials, 1948-1949

I-001	EM 29 "Csóka" (Jackdaw)	
I-002	R-18A "Kánya" (Kite)	
003	SG2 ??	
G-004	Daru II. "Daru" (Crane)	
I-005	Sokol M1C "Sirály" (Gull)	
S-006	Aero C-103 "Pelikán" (Pelican)	
G-007	Aero 45 "Kócsag" (Egret)	
G-008	K 65 (Fi 156) "Gólya" (Stork)	
009	??	
I-010-11	UT-2 "Galamb" (Pidgeon)	
I-101-	Bü 131 "Csiz" (Siskin)	16a/c
I-201-	Zlin 381 "Fecske" (Sparrow)	45 a/c
I-251-	UT-2 "Galamb" (Pidgeon)	33 a/c
G-301-	Ar.96A "Varjú" (Crow)	6 a/c
G-351-	Avia C-2 "Holló" (Raven)	10 a/c
G-361	Ar.96B "Holló" -/-	
G-362-	Avia C-2 "Holló" -/-	10 a/c

Added in 1949-1952

I-301-	Jakovlev UT 2 (only 2 serial digits painted)
I-401-	Jak 18 "Fűrj" (Quail) (-/-)
G-201-	Aero 45 "Kócsag" (Egret)
G-401-	Jak 11 "Ölyv" (Buzzard) (only serial painted)
V-001-	Jak 7 "Liszánka" (-/-)
V-101-	Jak 9P "Vércse" (Windhover) (-/-)
Z-001-	Il 2 "Stormovnik" (-/-)
Z-101-	Il 10 "Párduc" (Leopard) (-/-)
S-001-	Jak 12 R (-/-)
S-101-	C-3A (Si 204) "Pelikán" (Pelican) (-/-)
S-201-	Li 2 "Teve" (Camel) (-/-)

Additional notes:

MÁG Magyar Általános Gépgyár (Hung. General Machine Factory)

WM - Weiss Manfréd Aircraft and Motor Factory, Csepel

FAG - Flugzeugwerke AG., Budapest

Dunai - Dunai Aircraft Factory, Tököl

MALÉRT - Magyar Légiforgalmi. Rt (Hungarian Air Transport Holding Company)

PIRT - Pestszentlőrinci Iparitelek Rt (Pestszentlőrinc Workshops Holding Company)

MÁVAG - Magyar Állami Vaggon és Gépgyár (Hungarian State Coach and Machine Factory)

ReGJÜ - Önálló Repülőgép Javitó Üzem (Independent A/c Repairment Workshop), Sóstó, Székesfehérvár

MWG - Magyar Vaggon Gyár (Hung. Coach Factory), Győr

AERO-EVER - Sportrepülő építő üzem (Sport a/c manufacturing workshop), Esztergom

EMESE - Kísérleti Repülőgépgyár (Experimental a/c factory), Ferihegy

Soviet/Russian Weapons Sets, 1/72 injection-molded plastic. Zlinek.

V001: SPPU-22-01. V002: Ch-31A/P + AKU-58E. V003 Ch-25MR + MT + APU-68UM. V004: Ch-25ML + MP and APU-68UM. V005 UB-32A. V006: UB-16-57U. V007: B-13L. V010: Ch-29T + AKU-58E.

These designations will confuse all but the most knowledgeable of modern Soviet/Russian aircraft. I was able to make sense of this alphabet soup only by reference to +4 Publications excellent drawings of 'external stores' in their new MiG-29 book (see review elsewhere in this issue of SAFO). The SPPU is a cannon pod, the Ch series are missiles and the AKPU/AKU are their corresponding launchers, and the B & UB are rocket pods.

The kits are very-well molded in dark gray styrene

with outstanding engraved surface detail, thin gates, and fins in scale thickness. All this indicates the use of a high-pressure injection machine. While the missiles are more complex than the cannon pods and rocket pods, all these kits consist of a multiple of parts so they are really miniature models. The instruction sheet (in Czech) is small but surprisingly complete, showing the placement of the parts, describing the colors (you'll need to know your Czech colors), and listing the aircraft that carried the weapon. All kits appear very accurate when compared to the drawings in the +4 Publications.

My only complaint is that some kits contain only one weapon while other contain a pair of weapons. The former is alright when it's a center-line store, but, in all cases, you'll have to research your arma-

ment load before ordering these kits. SAFO has a small supply of these kits now, but, if the demand is great enough, I'll be ordering more.

While I have not been able to compare these kits to the Hasegawa Weapon Sets, I seriously doubt if the anyone can do a better job. Review copies provided by Vladimir Stepanek.

White Metal Seats, 1/72 scale. A&V Models, Jaromir Anis, A. Dvoraka 803, 272 00 Kladno, Czech Republic.

These little seats have been previously reviewed in SAFO. Rather than go over them individually, I will simply comment that they are all well cast with no flash and sharp detail. One new wrinkle is that the sets for the Spitfire and Typhoon include a control column as well as a seat. Highly recommended.

decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-

Delta Aviation Publishing, 38 Hawksley Ave., Hillsborough, Sheffield S6 2BE, South Yorkshire, England.

New SAFCH member, Glenn Ashley, has announced that Delta Decals has launched a new line of decals that will include many small-air-force subjects. Planned for release during the next year, or so, are the following 1/72-scale decals. 002 Cuban AF #1, 003 Portuguese AF, 005 Croatian AF #1, 011 1969 Salvador/Honduras Soccer War, 012 Cuban AF #2, 014 Nicaraguan AF, 015 Yugoslavian AF #1, 018 Croatian AF #2, 020 Arab AF National Insignia, 021 Hungarian AF #1, 022 Lebanese AF, 024 Argentine AF #1, 025 Libyan AF. 002 and 011 will also be released in 1/48 scale. The price for these decals is scheduled at £3.50 plus £1.20 postage for 1 to 5 sets outside Europe. Now that I've got your salivary glands working overtime, let's see what we can expect from these decals in terms of quality and subject matter by reviewing sheet their first small-air-force sheet.

Cuban AF, A-26, T-6, P-47, & Sea Fury. 1/72-scale decals. 72-002. This set consists of a large sheets (11.5 cm by 26.5 cm) providing the complete markings for 4 a/c: (1) Douglas A-26 Invader '917'. Included are the inscription for the FAR (Fuerza Aerea Revolucionaria) but the white-star-and-bar insignia of the earlier FAEC (Fuerzas Aereas Ejercito de Cuba). The instruction sheet indicates that Delta noticed this after the sheet was printed because the 'FAR' is crossed out on the drawings of the A-26, but no replacement is denoted. The only photo I've found of '917' is in "Foreign Invaders" by Dan Hagedorn and Leif Hellstrom. In the caption, '917' is identified as a 'genuine' FAEC Invader, but neither the inscription nor the insignia is visible. Perhaps Dan will be able to help clear this up for us. (2) Hawker Sea Fury '541' in the markings of the FAEC. The color scheme is given as natural metal with yellow cowl front and spinner. (3) F-47D Thunderbolt '452' of the FAEC in natural metal with yellow cowl with red cowl front. (4) AT-6G Texan '116' in yellow overall with 'FAR' inscription and insignia.

These decals are printed by Propagteam in the Czech Republic. This will be enough of an endorsement for anybody who has seen the excellent decals produced by this company. For those who have not had this pleasure, their decals are well printed in perfect registration, with absolutely sharp color divisions, and dense, accurate colors with no bleed through. These decals are highly recommended.

[Editor's note: Glenn has sent a number of these decals for sale through the SAFCH Sales Service. The income from these will be used to send back issues of SAFO to Glenn. When they sell out, Glenn will send future Delta releases. If you buy your Delta decals from the SAFCH, you will profit in several ways: You'll have a convenient, competitively-priced source for Delta decals and Delta will have a collection SAFOs to influence their selection of future subjects. However, no matter where you get your Delta decals, give them your support so this line of small-air-force subject will succeed and grow.]

[Editor's note: The following is Dan Hagedorn's reply to my request for comments on the Delta decals for the Cuban AF.] "The photo on page 68 of Foreign Invaders is indeed a genuine FAEC aircraft and the letters midway up the vertical fin are Block style 'FAEC' characters. The national insignia in use at the time is the white star outlined in red with the blue 'wings' like color side view of P47 FAEC 452 in my P47 book. At that time the FAEC B26Cs did have gun turrets in place with guns mounted.

"The decals for P47D FAEC 452 are clearly based on my P47 color side view. The size of the numerals and the national insignia are incorrect and the instructions omit the fact that the windscreen frame was painted black.

"The AT6F depicts the example that is presently in openair display status in Cuba, and the markings of this aircraft are believed to be completely spurious. For genuine FAEC AT6F markings, see the book Central American and Caribbean Air Forces. So far as I know, true FAR AT6F markings have not been established.

"The FAR Hawker Sea Fury seems to be based on the Squadron/Signal publication. Fellow SAFCH member, Nick Waters will confess that he had nothing more than a 'verbal description' of an FAR Sea Fury with a yellow prop spinner and leading edge cowling. Photos that I have received since my book on Caribbean air forces was published lead me to believe that the only FAR Sea Furys that had any 'color' to speak of was FAR 575, one of the T.Mk.20s, which wore the odd chocolate brown overall camouflage similar to the late P47Ds (I have a color slide of one) and which had a yellow prop spinner, yellow '575' at mid fuselage and yellow prop tips. This was essentially the scheme it had when taken over from the FAEC."

Dan Hagedorn (SAFCH #394), PO Box 682,

Centreville, VA 220200682, USA.

MiG-21bis Fishbed L/K, 1/72-scale decals. 72-037. Hi-Decal Line, Kilinsakiego 22, 40-062 Katowice, Poland.

Another fine sheet from Hi-Decals, with their usual size (9 cm by 13 cm) and high-quality printing proving national insignia, unit insignia, serial numbers, and a plethora of stencilling for some very unusual subject. This time it's MiG-21bis for the Soviet AF, Ukraine AF, Polish Navy, Yugoslav Republic AF, Croatian AF, and East German AF. Of particular interest to SAFO readers are: (1) A camouflaged Fishbed N, yellow '01', of the Ukraine AF with trident insignia on tail and blue/yellow roundels on the wings. (2) A natural-metal Fishbed L of the Polish Navy, red '0809', with unit insignia on tail and nose, and 'eyes' which are used to scare away birds. (3) A natural-metal Fishbed N, '17136', with the national new Republic insignia consisting of a disc horizontally divided into blue/white/red. (3) A natural-metal Fishbed L of Croatian AF, '102', with large Croatian flag on fin, shield insignia on fuselage and wings, and the black-knight insignia of the 1st Fighter Squadron.

Sufficient markings are provided to do all these a/c, but only enough stencilling for one a/c. But, don't despair. These stencils, numbered from 1 to 44 with many duplicated two and even four times, will keep you busy for many a happy hour.

The instruction sheet is, as usual, very complete, showing the placement of all markings and stencilling. Colors are identified by FS595 equivalent as well as Humbrol and Model Master numbers. This sheet, as all Hi-Decals sheets, is most highly recommended.

Focke Wulf FW 189 A-1, 1/72-scale decals. 72-008. H.A.D. Distributed by: Mila Hobby Centrum, Mos u.1, Budapest VIII, Hungary.

A small sheet (6 cm by 9 cm) in two colors (black and white), but what attractive subjects. This sheet provides markings for two Hungarian FW-189: (1) F0-55 of the 3/1 Royal Hungarian "Honved" Short-Range Reconnaissance Squadron, flown by Lt Lajos Akos. (2) F0-64 of same unit flown by Cornet Bela Csapo.

The sheet included markings for both a/c including national insignia, unit insignia (white pegasus), and inscription. The 2-sided instruction sheet provides markings and color information, but the split-plan view makes it necessary to find other references for the upper port-side camouflage pattern. This

V3252 Yugoslav Post-War Bf109G-10. Here's a scheme I haven't seen previously. The instruction sheet explains: "This was an ex Croatian aircraft flown by Warrant Officer Tatarevic from Zagreb to Mostar on 20 April 1945. It's Croatian markings were painted out with dark green and hand painted stars and tail stripes added." The instruction sheets shows that the underwing crosses were not painted out; instead, the stars were distorted way out of proportion and are applied over black-bordered

V3257 Israeli Mustangs. Markings are provided for two Israeli P-51D: "Aircraft '19' decals are based on a frequently published photograph of it crashed in the desert during the Suez 'crisis'." It carries a blue/green and dark earth upper surface camouflage with light grey undersurfaces. The second aircraft is 'Bozzy', "one of the first Mustangs obtained by Israel in 1948 it was smuggled in from America as 'agricultural spares'." The aircraft, coded '41', is overall weathered natural metal with the red and white rudder stripes of 101 Squadron. Although neither aircraft carried squadron badges, three 101 Squadron badges (winged death head) are provided for use on other models.

V3265 Israeli Mosquitos. Markings are provided for 3 Israeli Mosquitos: '2019', '2114', and '39'. All are silver doped overall with the national insignia consisting of the Star of David which is considerably smaller than the background white disc. Two squadron insignia (bat) are included for application to the entrance doors of the first two aircraft.

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Tiger and Olympos and another ground placed stripped from paint to show the early scheme of the Greek's. Most of the German F104s retained their original German camouflage through most of their service. But later they were repainted to Vietnam colors when they were passing the 150 hr maintenance. For example TF5953 retained a big greygreen patch in end of it's fin. TF5906 was until 1991 with lizard colors of blackgrey, green, dark green, wrap around with German inscriptions and Greek roundels placed over German crosses. Mostly the airplanes were not clean and they were painted with Greek inscriptions. Note 7409 was the German Marine anniversary paint scheme. Greeks did not strip it but they repainted it and in my service most of it's empennage was displaying it's old identity. Most of the planes were worn out of color with the highlight of FG7166.

"A strange thing was that very few RFs were listed as RF in their buzz number; lets say 7206 was listed as RF206 in the back of the fuselage, however, other RFs were listed as FG. The RF only contained their sideways camera; not the down looking one in the canoe fairing. Most of the German F104s had chaff and flare position, as for armament they used the BRD (bomb rocket dispenser) and Mk84 bombs and very few times AIM9 in TOP GUN exercises. An experimentation should be listed for FG6766 (actually an RF) which was fitted with RWR of Greek technology with receivers fitted behind the cockpit.

"In 1993 while I was serving the F104s in 336 sq the order was placed to put the F104s in reserve storage in Agrinio where, other old F104s are dumped along with P86Ds. Every 104 that was reaching it's 150th hour was flown to Agrinio were about the half were kept airworthy for some time.

"In late 1992 the painting of Olympos airplane of 7151 took place. That time from 1992 to 1993 the sq had to warn out the F104 to put them in reserve. So every reserve pilot came by to fly and there were times that 30 sorties a day were normal! Technicians each had 4 planes to sign out. The last operational sortie was of March 31, 1993 and thereon most of the airworthy planes were transferred to Agrinio Air base for storage while the last flight was on May 16, 1993 when the last 3 TF104G took off from Araxos. At the same time the 335th had already received it's first 4 A7Es. Few disarmed F104s were put in display in public spots. The Olympos and the Tiger (32720) planes are earmarked for the Hellenic Air Force museum, while some were flown directly to other air bases for permanent display.

"After 29 years the history of the Hellenic Starfighters ended in a ceremony. For these years the F104 kept a low accident record through out it's

service. There was a time where a 104 came back with an aileron missing and Greek pilots did their best to use the 104 to the peak of it's performance. All of the pilots respected the characteristics of the 104 and a love or hate relationship grew up between them. As for the technicians they did their best to maintain it perfectly and neatly. They were the ones to come first and leave last from the tarmac." Kyriakos (Gary) Palouljian, 1123-1/2 Spazier St., Glendale, CA 91201, USA.

"While working on the computer file for my book on the aircraft of the small air forces, I thought it might be interesting to see which a/c were used by the most countries. A list of the top (excluding use by the US, UK, USSR, and pre-45 Germany/Japan) follows.

1. (113) Douglas C-47: 2. (85) Bell UH-1: 3. (82) Alouette III: 4. (77) North American T-6: 5. (67) Lockheed C-130: 6. (66) Bell 206; Bell 47: 8. (63) Mil Mi-8: 9. (61) Alouette II: 10. (57) MiG-21: 11. (53) Beech 18: 12. (49) Cessna 172; BN Islander: 14. (48) MiG-17; Cessna 337: 16. (46) Boeing 707; Sikorsky S-55: 18. (44) Lockheed T-33; Fokker 27: 20. (43) An-26; Puma: 22. (42) North American F-86: 23. (41) MiG-15UTL: 24. (40) Falcon 20; DHC-2 Beaver; MiG-21U: 27. (39) Beech King Air; Douglas C-54; DH Tiger Moth; Hughes 369: 31. (38) Cessna 185; An-2: 33. (37) Mil Mi-4; Northrop F-5: 35. (36) Aero L-39 Albatros; Avro 504; MiG-19: 38. (35) Super Puma; Gazelle: 40. (34) Supermarine Spitfire; CASA 212; Sikorsky S-58; DH Vampire: 44. (33) Avro Anson; Douglas DC-6; An-24: 47. (32) Cessna 180; Hiller 360; Piper Super Cub: 50. (31) Cessna 310; Consolidated Catalina; An-12; Il-14; SF.260; Pilatus PC-6: 56. (30) Boeing 727; MiG-15; Mil Mi-24; North American T-28; MiG-23/27; Junkers Ju-52: 62. (29) Su-7/17/20/22: 63. (28) Cessna Bird Dog; Dauphin; Ecureuil; Yak-11; Bo 105; CH-47: 69. (27) Cessna 402; CM.170 Magister; Yak-18: 72. (26) Cessna 206; Cessna A/T-37; MiG-29; North American P-51; Hughes 269: 77. (25) Curtiss C-46; Gulfstream II; North American B-25; Short Skyvan; DH Dove: 82. (24) Aero L-29 Delfin; DH-89 (Dragon); DHC-4 Caribou; Douglas A-26; Grumman Albatross; Piper Aztec; Caudron GIII; Il-28; Mil Mi-1: 91. (23) DHC-6 Twin Otter; Vultee BT-13/15: 93. (22) GD F-16; Avro Oxford; Breguet 14; Consolidated B-24; DHC-1 Chipmunk; DHC-3 Otter; DHC-5 Buffalo; Dornier Do 27; HS 125; HS 748; Pilatus PC-7; Sikorsky S-70; Yak-40.

John C. Thornburg (SAFCH #175), Mailer #41, PO Box 10005 CK, Saipan, MP 96950-9506.

[Editor's note: It is tempting to quibble with Chris's grouping of types, e.g. lumping all MiG-21s together but separating out the MiG-21U. How-

ever, any grouping is rather arbitrary and would probably not alter the results significantly.]

"The kit review of the Usk Caproni CA133 in SAFO #73 was most interesting, in particular regarding the colour scheme of the Austrian Air Force machines. I have not seen the kit yet, but P.A. Brown (SAFO #1397) informs me that the kit carried a cautionary comment indicating a lack of certainty as to the actual colours and pattern of the camouflage. I hope the following information, from Austrian sources, may be of use to modellers and aviation historians. The text is a translation from the original German.

The Five Caproni CA-133s formed the Bomber Command of the Reconnaissance Squadron of Flying Regiment One at Wels. They were transferred, in October 1936, to Neustadt Vienna, and later formed there Bomber Command Number One of the assembled Bomber Squadron on 10 July 1937, which together with both commands was transferred to Aigen in December 1937. The following Caproni CA133s were available: Service Number 31 Works production number unknown, delivered Autumn 1935. Shot down over Wels 15 June 1936. [Editor's note: By whom?]

Service Number 32 and 33 Works production numbers 3844 and 3845, delivered 3 April 1936.

Service Number 34 Works production number 3948, delivered at the end of April 1936.

Service Number 35 Works production number 3994, delivered on 23 September 1936.

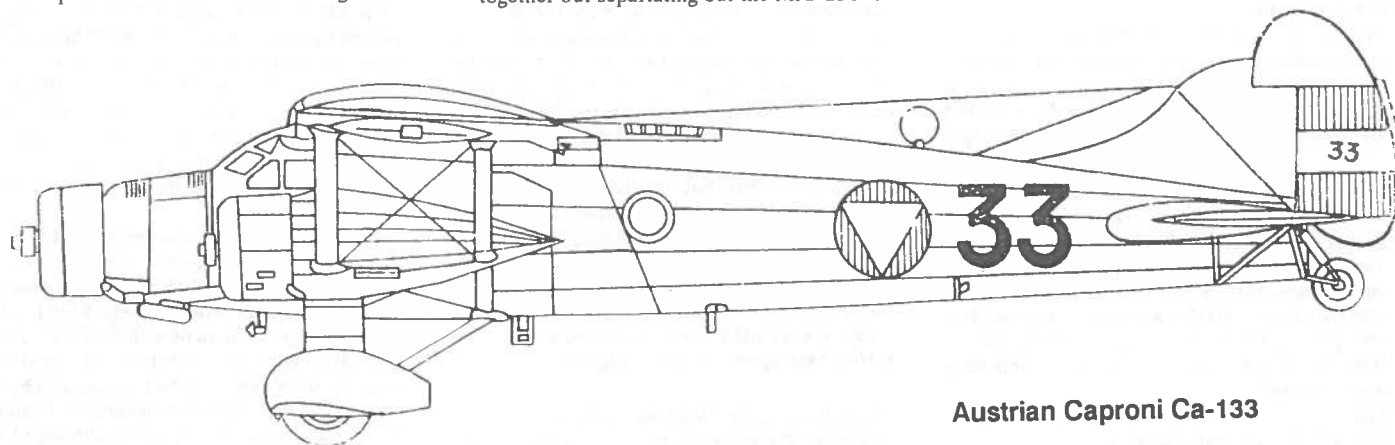
According to the statement of Bomber Command Two, Service Number 32 and 33 were distributed to Bomber Command Number One, and Service Number 34 and 35 to Bomber Command Two.

Colour scheme: Sandy yellow (pale yellow ochre) overall.

"As the Austrian source states overall sand as the colour of the aircraft, I assume that this colour was the Italian Air Force standard Sand finish. The colour scheme quoted in the Usk instruction sheet of dark brown, green, and light grey over black was the camouflage scheme applied to the Austrian Romeo Ro-37 reconnaissance aircraft (also purchased from Italy)."

Daryl G. Twibey (SAFCH #128), 62 Holmhirst Road, Woodseats, Sheffield, Yorkshire, S8 0GW, England.

[Editor's note: The drawing, via Daryl, is from "Truppendienst 4/1977".]



Austrian Caproni Ca-133

LITTLE KNOW AIR FORCES OF THE 1920s

Part 7: Armenia, Azerbaijan, Georgia and Siberia

Lennart Andersson

Armenia

Armenia was independent between 28 May 1918 and 29 November 1920. Military equipment was delivered to the army by the Allies and from the USA in the autumn of 1920 and aircraft were acquired at about the same time, but no details are known.

Azerbaijan

Azerbaijan declared its independence on the same date as Armenia, 28 May 1918. In March 1920 nine aircraft of unknown type were handed over from General Denikin's White army to the government at Baku. In the following month the Red Army invaded and on 28 April the Azerbaijan republic ceased to exist.

Georgia

Georgia, which is situated south of the Caucasus with its capital at Tiflis (now Tbilisi), existed as an independent state between 26 May 1918 and 25 February 1921. An air force, based on equipment left by the Imperial Russian Air Fleet, was established in 1918, but few details are known. Twenty to twentyfive two-seat SVA-10 reconnaissance aircraft are reported to have been ordered from Italy and received in 1920. A first batch of ten was delivered to Tiflis in November 1920 and were testflown there by the Ansaldo company pilot Lovadina. Some of these aircraft were later captured by the Red Army and taken on charge by the Soviet Russian Air Fleet.

A photograph of a Sopwith Camel in Georgian markings also exists. Georgian use of British aircraft is explained by the presence of a British intervention force in the area in 1918-1920. The Georgian Air Force ceased to exist when the country was occupied by the Red Army in February 1921 and Georgia was incorporated into Soviet Russia. At that time, the Georgian Army had ten aircraft, but, because of a shortage of high-grade fuel, these never got off the ground during the short war against the Red Army. Soviet Russian military estimates credited Georgia with the following number of aircraft: 10 September 1920, 18; 25 October 1920, 12; 12 January 1921, 35; and 1 February 1921, 56.

Qty	Date	Type	Notes
1		Sopwith Camel	
10	11.20	Ansaldo SVA-10	
	1920	Ansaldo SVA-10	(Total 20-25?)

Siberia and the Far Eastern Republic

Several air forces existed in Siberia in the 1918-1922 period. Admiral A.V. Kolchak, one of the 'White' generals of the Russian Civil War, overthrew an earlier White government at Omsk, in Western Siberia, and established a new government there in November 1918. Pressed by the Red Army, Kolchak's government moved to Irkutsk in November 1919 and was finally dissolved on 5 January 1920. An air fleet was organized by Kolchak

in August 1918 and used in the Ural-Volga area and in Siberia.

It included air units with Nieuport, Sopwith, Salmson, Morane Parasol, Farman, and LWF aircraft. The American LWF aircraft had been obtained from the so-called Czech Legion, which had imported them from the USA in 1918 (See SAFO #10). Kolchak was executed on 7 February 1920.

General G.M. Semenov, who was supported by France and Japan, set up an army at Harbin, in Manchuria, to fight the Red Army. He entered Siberia in March 1918. A government was established at Chita in Eastern Siberia in the summer of 1918 and was in existence until October 1920, when Semenov fled to Manchuria. Semenov replaced Kolchak as supreme commander of the White forces in Siberia at the beginning of 1920.

Twentythree French Salmson 2A2 two-seat aircraft were delivered in January 1920. In July, four aircraft defected to the Red Army. A single 80-hp Ozaki two-seat trainer was purchased from Japan and an aircraft with 110-hp Le Rhone engine was built by I.I. Dil. The Dil was taken to Manchuria but most of the remaining aircraft were probably taken over by the Vozdushnyi flot Sibirii, Siberian Air Fleet, the air force of the People's Revolutionary Army of the Far Eastern Republic, which had been proclaimed on 6 April 1920.

The Far Eastern Republic ceased to exist when it was incorporated into Soviet Russia on 10 November 1922. Although the air units of the Vozdushnyi flot Sibirii, which were commanded by F.A. Astakhov, had been listed by the Soviet Russian Air Fleet at least since 1921, they were formally absorbed only in December 1922. At that time, four Salmson 2A2s (numbered 1-4), three Sopwith 1 1/2 Strutters (5-7), two Farman F 30s (8-9), one Popov VII (10), and one LWF (11) were on charge and based at Spassk and Chita.

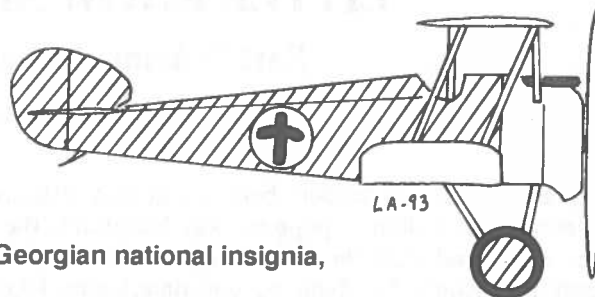
Qty	Date	Type	Notes
3		Sopwith 1 1/2 Strutter	
3	8.19	Sopwith 2A2	
		Nieuport 17	
5		Nieuport 23	
1		Morane Type L Parasol	
1		Farman HF	
18	4.19	LWF (Wilson)	From the Czech Legion
		Dil	
1	1920	Ozaki	
23	1.20	Salmson 2A2	
4	1920	Salmson 2A2	22 (s/n 1,2,3,4)*
3	1920	Sopwith 1 1/2 Strutter	22 (s/n 5,6,7)*
2	1920	Farman F 30	22 (s/n 8,9)*
1		Popov VII	22 (s/n 10)*
1	1920	LWF (Wilson)	22 (s/n 11)*

* Far East Republic

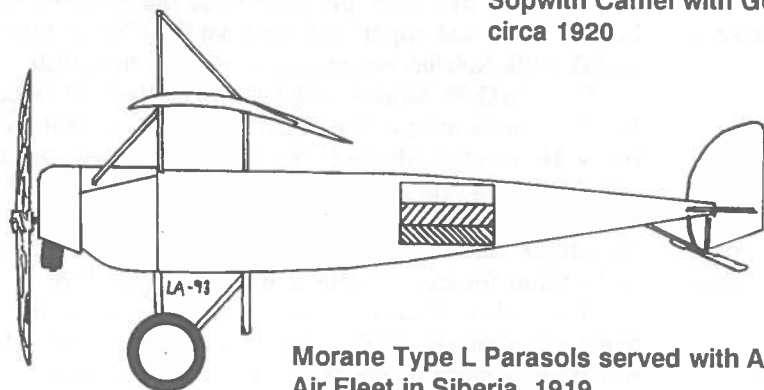
Lennart Anderson (SAFCH #68), Tiundagatan 52B, S-752 30 Uppsala, Sweden.

Air Forces of the 1920s:

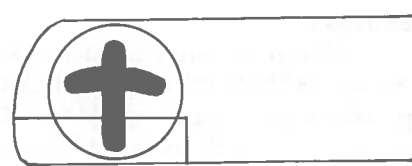
Georgia and Siberia



Sopwith Camel with Georgian national insignia, circa 1920



Morane Type L Parasols served with Admiral Kolchak's Air Fleet in Siberia, 1919



News from Spain

Revista de Historia Naval, published by the Instituto de Historia y Cultura Naval. Juan de Mena, 1 la Planta, 28071 Madrid, Spain. Yearly subscription: \$30 (4 issues a year). Of course, this is a naval magazine, but, from time to time, publishes articles of aeronautical interest. If so, they will be reviewed in these columns, but most articles in each issue are on purely naval matters.

Although published in 1993, I have only recently seen No.43. **Losses of Republican merchant ships caused by flying boats of the Legion Condor during the Spanish Civil War**, by Spanish Navy's Comandante Cesar O'Donnell Torroba, with line drawings by Justo Miranda. 30 pages, 6 photographs, and 3 line drawings (He 59, He 69, and Ar 95). A brief history of See-Aufklarungsstaffel AS/88 is followed by a description of the a/c types used by this unit. Mention of the Nationalist and Italian units committed to the blockade in the Mediterranean is also made. Then come the accounts of the loss of 44 Republican merchant ships caused by the German unit between January 1937 and February 1939, AS/88's casualties and losses (both in action and in accidents), and awards are also recorded. This is, as far as I can tell, the first serious research on the antishipping activities of the Legion Condor which includes an important first: the first German aerial torpedo attack since World War One, an foretaste of what was to come in WWII. Highly recommended for those interested in air-sea warfare in Spain and German torpedo warfare in general.

Of an even earlier date is an article by French Navy's Capitaine de Vaisseau Claude Huan in no. 14, **The Kriegsmarine and the War in Spain**, published in 1986, but which is probably still available from the address above. 28 pages, 6 maps. A well researched article dealing with the dubious German naval activities in the NonIntervention Committee, which was not without serious incidents. In the middle of August 1936, half the German fleet was in Spanish waters. All major merchant and military German naval operations are described.

Of special interest for aviation enthusiasts are the Republican air attacks on German warships (on the pocket battleship Deutschland) and on other Non-Intervention Committee ships (including the British destroyer HMS Hardy), and AS/88's attacks on Republican warships on different occasions. Some of these attacks are reviewed in some detail. The article is completed with a table of the German naval forces extant in July 1936 and a table reviewing the Spanish forces on the two sides.

As for book reviews, I have finally managed to get No.1 in the series *La Maquina y la Historia* (Machine and History) from Ediciones Quiron, Calle Cromo, Parcela R-64, Poligono San Cristobal, 47012 Valladolid, Spain. This is a heterogeneous collection of profile booklets and books. No. 3, *Los cazadores de la Legion Condor*, by Juan Arraez Cerda has already been reviewed in these columns (SAFO 68). No.2 is a book by Javier de Mazarrasa, *Blindados en Espana*, dealing with armored vehicles and tanks in the Spanish Civil War, which is to be followed by a second volume concerning the same subject, but on the postwar period.

No. 1 is a booklet, *Grumman SHU-16B Albatross ASW*, by Carlos Fresno. 21.3 x 30 cm size. No year of publication. It consists of 16 pages, illustrated with 12 b&w and 4 color photographs, plus two pages of color profiles of Albatrosses from different countries. Another profile in a different scale, covering two pages, beautifully illustrates a Spanish Albatross. There is also one page containing 5view technical drawings. Chapter One gives a short account of the a/c's origins. Further chapters briefly cover the usage of this plane in Norwegian, Spanish, Chilean, Peruvian, Creek, and Colombian service. An extra chapter on the Fairchild 91 "Baby Clipper", also illustrated with a small scale color profile, is included with no explanation for its intrusion in this booklet, which gives source for a point of criticism to Quiron's editions: they should improve their production layout, which, in some cases, shows improvisation and lack of planning;

another publication in this series has also been numbered as ONE! (a book on the BAe/MDD Harrier, by Salvador Rello Cuesta). Finally, there is one page listing every SHU16B of the 37 built, including prototypes. Price of the booklet is Ptas 500, plus p&p, available from the address above. For small air forces enthusiasts.

And for the book review as well, another of my promises, *Guerra Aerea Sull Etiopia 1935/1939*, by Roberto Gentilli, published by EDAI, Via G. Guinicelli 4, Firenze, Italy. First published in 1992, price L 39,000. 223 pages, 197b&w photographs, 10 maps, and four color profiles on the covers (Ro.37, Ro.1, Ca.101D2, and Ca.133). 17 x 24 cm format. The Italian colonial adventure in East Africa is seriously studied here from the aerial point of view and beautifully illustrated with some of the most interesting photos of inter-war aircraft in action, but sadly, only two Ethiopian a/c are shown. The book is divided in two parts, plus four appendices. The first part (17 chapters) covers the origins of the conflict, the organization of the Italian forces and the small Ethiopian air force, and the operations up to the first part of 1936. The second part (11 chapters) deals with the period between the second half of 1936 and 1939. The first appendix lists every Italian a/c used in the campaign and a succinct table of a/c characteristics. The second appendix lists every single loss and corresponding casualties. The third appendix recapitulates the histories of Reggia Aeronautica's units in East Africa up to WWII. Practically every major operation is dealt with in detail. The author doesn't forget to mention the most debated usage of chemical warfare in this war, which others would probably have dropped. This book is highly recommended for those with a penchant for wire-braced aircraft. A continuation of the history, concerning Italian air activities in East Africa in WWII, from the same author, would be most welcome.

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SMALL AIR FORCE PHILATELY

John Cochran

Stamp collecting shares with small air forces a fascination for small countries and islands in out-of-the-way places. Philately is very much a personal hobby and I would only attempt a few guide lines to show the richness of small air force material shown on the stamps of the world. Many countries have considered their stamp issues as a very powerful form of propaganda, whether directed towards collectors or for normal postal use. The more peaceful aspects of civil aviation are more abundantly displayed than the military aspects, but several nations have obviously decided to show their aggressive capabilities as well as celebrating their military successes. One possible aspect of small-air-force stamp collecting could be to collect representations of all the aircraft that have, at sometime, served with these air forces. However, this would be a very large task. A list and description of every stamp that featured the various versions of the Douglas DC 3, would fill a book. Not far behind would be the Bleriot monoplane, the Canadian Otter, the Britten Norman Islander, Fokker F 27, Harvard, Ju 52, and many others. The following list, in country order, to follow most stamp catalog procedure, is limited to small air force issues, and aircraft bearing small air force insignia. The numbers refer to the Stanley Gibbons Simplified Catalog. I must stress, however, that philately is one of the most personal of hobbies and this is but a general guide based on my own collecting. I should also point out that, as stamps are official government publications, they could be considered as relatively accurate.

ABU DHABI

79 1971: To celebrate the Abu Dhabi Defence Forces and features Hawker Hunters in Abu Dhabi insignia.

ALBANIA

1258 1968: 25th anniversary of Albanian armed forces, shows MiG19 (?).

ANGOLA

706 1972: Celebrating first flight Lisbon to Rio, Fairey IIID in Portuguese markings (Macao 519 has a better illustration).

ARGENTINA

929 1958: 50th anniversary of Argentine Aero Club, from which was formed the original Air Force, depicts a 1908 Farman.

1263 1969: Although celebrating 50 years of Air-mail service, shows a Nieuport 28 in Air Force markings.

1278 1969: Aeronautics week, an unmarked Nieuport 28

1351 1970: Aeronautics week, unmarked Morane Saulnier P.

1382 1971: 25th Aeronautics week, Argentine marked Morane Saulnier P.

1414 1973: 10th anniversary of flight by Air Force to South Pole, Air Force DC3.

1451 1974: First of an annual series to mark Air Force Day, unmarked Bleriot monoplane.

1478 1975: Air Force Day, a balloon.

1527 1976: Air Force Day, a Bleriot.

1573 1977: Air Force Day, unmarked unknown aircraft.

1574 1977: 50th anniversary of government Military Aviation Factory, a stylized jet fighter.

1644 1979: Air Force Day, unmarked Spad XIII.

1685 1980: Avro Gosport in Air Force markings.

1715 1981: Air Force Day, unmarked, unknown aircraft.

1737 1982: Conference of Air Force commanders

of American states at Buenos Aires, features conference emblem (most Latin American countries celebrated this on stamps).

AUSTRALIA

489 1971: 50th anniversary of Air Force, DH9a and Mirage III.

658 1978: Celebration of Australian aviators, Sopwith Camel Australian or British markings?

7614 1980: Various Australian military aircraft, Wackett, Winjeel, Boomerang and Nomad.

AUSTRIA

1363 1961: Celebrating first Austrian airmail service, Hansa Brandenburg Cl, Austrian markings.

BELGIUM

810814 1938: Propaganda for Air Force, shows King Leopold in an unknown fighter biplane (Fairey Fox?).

BERMUDA

465 1983: Celebrating first flight over Bermuda, a Curtiss JN4 in apparently AEF markings.

BOLIVIA

944948 1974: 50th anniversary Air Force (I have not obtained these stamps, but supposed to show various BAF types).

BOPHUTHATSWANA

247251 1990: Air Force, various types Alouette III, Bk117, PC7, PC6, CASA 212.

BRAZIL

666 1941: Aviation week, BAF emblem.

789 1949: Homage to BAF, shows emblem, map of Italy, and DC6.

1276 1969: Brazilian aircraft industry,, Embraer Bandeirante in BAF markings.

1981 1982: Aeronautics Industry Day, Embraer 312.

2183 1985: AMX fighter project.

2265 1986: Military uniforms, Air Force 1930.

2269 1987: Air Force in Antarctic, Lockheed C130.

2465 1991: 50th Anniversary Aeronautics ministry, AMX and P47.

BULGARIA

615 1946: Ju87 (1941/1944 markings).

28813 1980: Armed Forces, various helicopters, Bulgarian markings.

29516 1981: Bulgarian aircraft, DVW 1, LAZ 7, DAR 1, 3 and 9.

CANADA

400 1942: War effort, N.A. Harvard.

9969 1980: Canadian built aircraft, CF100, Lancaster, Hurricane, JN4.

10267 1981: More Canadian built aircraft, Tiger Moth, CL41.

CHAD

107 1963: Max Holste Broussard, could be Chad markings, but probably French.

CHILE

707 1973: 50th anniversary of Chilean Naval Aviation, emblem.

127982 1990: Air Force, Vickers Wibault, Curtiss Falcon, Pitts S2A, Extra 300.

135457 1991: Voisin, SE5a, Morane MS35, PB5.

CHINA

3526 1921: Curtiss JN4, Chinese markings.

3848 1929L as above but different markings.

CHINA TAIWAN

3446 1960: Chinese Air Force, stylized aircraft.

5189 1964: Armed Forces Day, F104.

COLOMBIA

1667 1982: American Air Forces cooperation, stylized aircraft.

CROATIA

86 1943: Croat Legion, HeIII.

CUBA

1618 1968: Armed forces civilian activities, An2 crop spraying.

2289 1976: 15th anniversary of Giron Victory, T33.

2712 1981: 20th anniversary of Bay of Pigs, stylized MiG21.

CZECHOSLOVAKIA

637 1946: Capt. Novak and Lysander.

1601 1966: MiG21.

1711 1967: L29 Delfin.

ECUADOR

637 1941: National Defence Fund, unknown fighters.

1582 1975: 15th anniversary of 1960 revolution, stylized F5s.

EGYPT

729 1962: 25th anniversary of Air Force College, biplane of 1937, unknown of 1962.

1493 1982: 50th anniversary of Air Force, F16.

EQUATORIAL GUINEA A rather spurious issue of about 1989 showing air aces of two World Wars. Includes Coppens' Hanriot HDI, Kazakov and Morane Saulnier N, Barracca and Nieuport, and even Tuominen and Fiat G50 (wrongly captioned as Me109F).

ETHIOPIA

296 1931: Potez 25, although unmarked it is known that early Ethiopian AF used this type.

FRANCE Free French Forces in Levant

15 1942: Free French insignia.

GERMAN DEMOCRATIC

615 1962: Peoples Army, MiG17.

GREECE

10946 1968: Celebrating the RHAF, PZL P24, Farman, Br19, F104G.

1117 1969: 20th anniversary of Civil War, AF insignia.

1537 1980: 50th anniversary RHAF, Mirage.

GUATEMALA

9245 1972: 50th anniversary AF, P26, Bleriot.

HONDURAS

10038 1983: 50th anniversary of Air Force, Curtiss Condor, NA16, Corsair, C47, A37B, Mystere.

HUNGARY

7136 1942: Horthy Aviation Fund, various stylized aircraft.

136673 1954: To stimulate interest in aviation, various including An2 and MiG15.

2799 1973: Military stamp collecting exhibition, MiG21.

2911 1974: Military Day, Mi18.

IFNI

218 1966: DH9 Spanish insignia.

INDIA

3978 1958: 25th anniversary of Air Force, Wapiti, Hunter.

468 1963: Defence campaign, unknown helicopter.

511 1965: Folland Gnat.

527 1966: Hindustan Marut.

943 1979: Chetak helicopter.

1053 1982: 50th anniversary of Air Force, Wapiti, MiG25.

1114 1984: Indian Navy, Harrier.

INDONESIA

1156 1967: MiG21.

1158 1967: Lockheed C130.

IRAN

18723 1974: 50th anniversary of Air Force, DH9, F84(?).

IRAQ

413 1958: Army Day, Hunter.

14758 1981: 50th anniversary of Air Force, Mi24,

An2, SAM 15, Dragon Rapide, MiG19.
ISRAEL
 229230 1962: Vautours.
 35860 1967: Auster, Mystere, Mirage.
 450 1970: Aircraft industry, Arava.
ITALY
 8257 1952: Armed Forces Day, various air force emblems.
 134954 1973: 50th anniversary of Air Force, G91, S55, G91Y, CR32, CampiniCaproni, F104S.
 171518 1981: Augusta A109, Partenavia P68, Aeritalia G222, Aermacchi MB336.
 174851 1982: Tornado, SIAI 260, Piaggio 166, Nardi helicopter.
JORDAN
 1324 1982: Army Day, F104A(?).
KOREA, SOUTH
 8167 1969: 20th anniversary of Air Force, F5, F4.
 1334 1978: 30th anniversary of Air Force, F4.
KOREA, NORTH
 N40 1951: Celebrating air force hero Kim Gi Ok with what appears to be a Yak11.
 N1115 1972: Air Force pilot.
 N1132 1973: Air Force pilot.
 N1292 1974: Although a civil An2, bears military markings.
LIBYA
 828 1978: Mirage.
MADAGASCAR
 423 1980: 20th anniversary Armed forces, MiG19.
MALAYSIA
 267 1983: 50th anniversary of armed forces, F5.
MONGOLIA
 101420 1976: RI, R5, K5, Po2, Z16, Yak6, Ju13.
 1125 1978: History of Aviation series. This portrays pilots Shagdarsuren and Demberel and I153, dated 1935.
NETHERLANDS
 597 1944: Liberation, pilot figure.
NEW ZEALAND
 671 1946: Peace, various RNZAF aircraft.
 142326 1987: Avro 626, P40, Sunderland, Skyhawk.
NICARAGUA
 629 1929: DH4.
NIGERIA
 394 1978: Stylized NAF aircraft.
NORWAY
 379 1946: 'Little Norway' training in Canada, pilot figures.
 524 1962: 50th anniversary of military aircraft, Rumpler Taube.
 1074 1990: 50th anniversary of entry into World War II, AF emblem.
NORFOLK ISLAND
 2934 1982: Celebration of Christmas 1942, RNZAF Hudsons.
OMAN
 227 1979: Armed Forces Day, Jaguars.

255 1981: Armed Forces Day, Lockheed C130.
 277 1982: Armed Forces Day, Jaguar(?).
 298 1984: Jaguar.
 314 1985: AugustaBell helicopter.
PAKISTAN
 228 1965: Armed Forces, F104.
 4836 1978: 75th anniversary of flight, Tornado, F4, MiG15.
 71524 1987: Air Force Day, Tempest, Fury, Attacker, F86, F104, C130, F6, F16, Mirage.
PAPUA NEW GUINEA
 117 1967: Curtiss P40, RNZAF.
PERU
 534 1934: Fairey III.
 1607 1985: American Air Forces cooperation, emblems.
PHILIPPINES
 8501 1960: 25th anniversary of Air Force, F84, Kaydet.
 12978 1973: Col. Villamor (ace) and P26.
POLAND
 484 1941: Wellington and Hurricane (RAF Polish squadrons).
 486 1943: Wellington.
 21002 1971: Polish aircraft of WW 2, P11c, Karas, Los.
 2261 1973: 30th anniversary Peoples Army, MiG21.
 25401 1978: Aviation history, RWD6, Mil2.
 3171 1988: 50th anniversary of State Aircraft Works, PZL P37 Los.
PORTUGAL
 127981 1965: 30th anniversary of Air Force, symbols and stylized aircraft.
 1896 1982: Fairey III.
 194851 1983: Uniforms and aircraft, Hurricane, F84G, Noratlas, Corsair A7.
ROSS DEPENDENCY
 10 1972: RNZAF C130.
ROMANIA
 1889 1947: Air Force Monument.
 19723 1948: Army Day.
 198790 1948: Air Force Day.
 (I have not been able to obtain 1972-1990 issues, but they are said to show various Romanian military aircraft).
 2346 1954: Aviation Day, pilot figure.
SLOVAKIA
 107 1943: Fighting Forces, pilot.
SOUTH AFRICA
 98 1942: Pilot figure.
SPAIN
 10634 1945: Civil War aces, Gonzalez and Morato.
 14625 1961: 50th anniversary of Spanish aviation, Cierva, Dornier Wal, Avro 504K.
 2573 1979: Armed Forces Day, Mirage.
 2618 1980: Armed Forces Day, F4.
SWITZERLAND
 1144 1988: Swiss Ju52.

SYRIA
 1484 1980: Army Day, MiG21.
THAILAND
 1165 1984: Armed Forces Day, F5.
TURKEY
 1940 1961: 50th anniversary of Air Force, stylized aircraft.
TUVALU
 155 1980: RNZAF Sunderland.
UNITED ARAB EMIRATES
 1047 1980: Mirages.
URUGUAY
 1633 1976: 50th anniversary of Spain to South America flight, "Plus Ultra" flying boat in Spanish markings.
 1922 1988 75th anniversary of Air Force, Farman and roundels.
VENEZUELA
 2172 1970: 50th anniversary of Air Force, Caudron GIII, Mirage.
 241821 1979: 59th anniversary of Air Force, Caudron, Stearman Kaydet, Bell UH1, F5.
 2710 1987: National Guard Jet Ranger.
VIETNAM, SOUTH
 S3834 1971: Armed Forces Day, stylized aircraft.
VIETNAM, NORTH
 Between 1965 and 1973 a series of stamps issued to celebrate destruction of US aircraft, usually stylized F105s. The Vietnamese aircraft are MiG17s and later MiG21s.
VIETNAM
 93541 1986: Various types in national insignia, only small air force is PZL P23 (Polish).
YUGOSLAVIA
 180710 1978: Various Air Force types, S49, Gull, Eagle.
 20334 1982: 40th anniversary of Air Force, Breguet 19, Potez 25, Soko Galeb.

PHOTOGRAPHS

A Korea, North. 1292 Antonov An2.
 B Equatorial Guinea. Uncataloged. Fiat G50 described as Me109F and marking wrong way round.
 C Poland. 2261 MiG21.
 D Bulgaria. 2951 DWV 1
 E Bulgaria. 2952 LAZ 7.
 F Cuba. 2289 T33.
 G Mongolia. 1125.
 H Mongolia. 1015.
 I Mongolia. 1016.
 J Brazil. 2183.
 K Poland. 2100.
 L Poland. 2102.

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News from New Zealand

"The RNZAF Orions are indeed going over to a low-visibility color scheme. NZ4205 was the first to be repainted in the new colors of overall matt grey, which is intended to make the aircraft harder to see, both visually and by infrared. NZ4205 (c/n 185-5208, Bu 152890) was repainted at the Woodbourne engineering base in June 1994. This is a trial scheme, and changes may be made before the rest of the Orions are repainted during major overhauls over the next few years. The finish is now grey FS36231 overall. From photos, I would have said that this was a two-tone scheme, but this may be due to the way the light is reflected from the curved surfaces of the aircraft. The red and blue portions of the Kiwi roundels have been replaced with dark grey FS36118, while the white areas are left blank, allowing the FS36231 background color to show through. The roundels are still worn in the usual six positions, but '05 does not have a fin flash. The 5 Squadron Albatros on the fin is much smaller than before, and is now pale grey with a dark-grey outline. The serial number is worn on the fuselage just behind the roundel, while the last two figures of the serial on the nose have been moved to the nosewheel doors and made much smaller. Both are dark grey. The nose radome is the same shade of grey as the rest of the aircraft, rather than black as before (grey radomes were trialed on both NZ4205 and 01 during 1993). The emergency markings are black, although the propeller warning stripe around the forward fuselage appears to be dark grey. The only color left are the white/red/white warning stripes on the tip of each propeller blade. The blades themselves are still aluminium with matt black cuffs and spinners. Wheel well and bomb bay interiors remain gloss white. The light grey IRDS turret under the nose was not initially fitted, but this has now been reinstalled.

"The Orions are to be rewired to extend their service lives for another 20 years. As the aircraft have each flown over 14,000 hours, they would have run out of fatigue life by the year 2000. Project Kestrel will replace the center section lower wing skins, the outer wings, and tailplanes, as well as refurbishing the engine nacelles, and adding a fuel-dump system to the five original aircraft, which do not currently have such a system. Work will begin in 1997 and will be completed by 2000. It will take about four months to modify each aircraft. Cost will be approximately \$100m NZ. A contractor should be chosen by the end of 1995.

"Another project, Sirius, comprises a number of separate up-grades to the Orion's ASW, communications, navigation, IFF, ECM, and self-defence systems (the latter being similar to those planned for the Hercules). This is still at the planning stage, with the exact extent of the upgrade still to be decided. An earlier plan to modernize several of these systems, known as Project Rigel II, lapsed in 1989 due to a lack of funding.

"The new color scheme applied to Boeing 727 NZ7271, in late 1993, was slightly revised in late 1994, and NZ7272 painted to match, returning to service in December. The overall scheme is much as before, but the light-blue area on the fin has been made narrower and the fin flash has been moved slightly further forward so that it is in the center of the stripe. Certainly an improvement, but I still prefer the original scheme.

"On Monday, 25 July 1994, RNZAF Hercules NZ7002 left Whenuapai, RNZAF Base Auckland, for Africa to assist with the UN effort in Rwanda. The 36 personnel (four of them women), included two air crews, ground crew, loading team, security

team, and medical staff. It stopped off at RAAF Base Richmond, Australia, to have cockpit armor fitted. This was only a temporary fit with the armor being on loan from the RAAF. The aircraft was due in Entebbe, Uganda, on Friday, but it was delayed at Nairobi, Kenya, by a local fuel shortage that also effected other aircraft supporting the UN aid effort. NZ7002 finally reached Entebbe on 1 August, where it was based during its stay in Africa, alongside USAF Hercules. The first aid flight, to South Africa to pick up a load of crushed soya beans and back to Goma in Zaire, was on 4 August. Later, flights were also made to Bukavu, also in Zaire. The Operation Reforge detachment was expected to spend about a month in Africa, although it was intended that this might be extended. In fact, the deployment was extended to six weeks. The last flight was on 15 September and the aircraft arrived back at Whenuapai on 20 September 1994. "As a result of RNZAF aircraft being engaged in a number of such relief and peace-keeping missions recently, it was announced, in December 1994, that three of the five C-130H Hercules are to be equipped with flight-deck armor, missile-approach warning systems, and chaff/flare dispensers. This should mean that two aircraft are available for such duties at any one time. Approval has been given for the purchase, at a cost of some \$15m NZ. Work should begin this year.

"According to a news item in NZ Wings magazine, the proposal to either acquire some KC-130 Hercules tankers, or convert some of the existing aircraft, has been dropped after many years of not being able to get the funding from the government. Australian Boeing 707 tankers will now be used as and when required, if they are available. Apart from this, the Skyhawks can carry buddy refuelling pods.

"As a result of a fire which seriously damaged the Korean fishing boat Dong Won 513 off Banks Peninsula on 3 December 1994, the RNZAF was given the task of sinking the vessel so that it did not drift and endanger shipping. It had been considered too dangerous to land a scuttling party on the boat, so the RNZAF was given a chance to use live ammunition against a real target. The Dong Won 513 was towed to a position 110 nautical miles east of Dunedin. On 16 December 1994, a safety zone of 20 nautical miles radius was established around the ship, up to a height of 15,000 feet. An Orion of 5 Sqn was used to check that the safety zone was clear and to provide communications and SAR cover. Six A-4K Skyhawks of 75 Squadron flew from Ohakea, accompanied by a single TA-4K acting as a buddy tanker and camera plane, attacked the ship with bombs and rockets at 1335 hours, 16 December, and then flew back to Ohakea. The Dong Won 513 quickly sank in deep water. Costs of the mission, over and above those involved in a normal training mission, such as weapons, are to be paid by the owners, although the precise figure is confidential. The Air Force did not release details of the weapon loads carried, but TV news reports referred to 500-lb bombs and rockets (CRV7?).

"Due to a fatigue fracture, one of the A-4K lost the outer part of its port aileron during the mission and had to land at Momona Airport, Dunedin. It was accompanied by a second aircraft, which returned to Ohakea the following day, while NZ6205 was repaired at Dunedin.

"One of the RNZAF Aerospace Industries CT/4B Airtrainers acquired a temporary civil registration in early 1994. NZ1936 (c/n 084) which belongs to the Pilot Training Squadron at Ohakea, became

ZKJDS during April/May 1994. It was used by the Pacific Aerospace Corporation Ltd (formerly Aerospace Industries) to help in the development of an air-conditioning unit for the Royal Thai Air Force. Thailand has 24 of the earlier CT/4A model, and six CT/4B delivered in 1992. Following its use by PAC, ZKJDS was returned to the RNZAF.

"Of the two ex-RNZAF AESL T6/24 Airtourers exported to Australia in early 1993, one returned to NZ in early 1994 with a new identity. NZ1763 (c/n 553) was temporarily registered in NZ as ZK-JAX, before crossing the Tasman Sea to become VH-MUM. But, after spending only about a year in Australia, it returned to NZ where it became ZK-WBW. Also back home is an ex-RAAF CT/4A Airtrainer. A19-055 (c/n 055) was ferried to Australia as ZKEAR in November 1975, for the RAAR. In May 1993, it was one of 36 retired RAAF Airtrainers sold off by auction and, later that year, it returned to NZ where it became ZK-CTA.

"Some of the ex-RNZAF BAC Strikemasters are also beginning to show up on the Australian civil register, as are some of the aircraft from Singapore. NZ6362 (c/n 302) is now flying as VH-AGI. NZ6372 (c/n 342) is VH-LLD, according to the magazine Australian Aviation. NZ Wings, August 1994, gives the p/i of VH-AGI as NZ6372.

"There was a small item on the RNZAF Friendship navigation trainers (NZ2781-83) on the TV-3 news, on Wednesday, 22 March 1995. These aircraft were retired in July 1992 with the disbandment of the NATTS. According to this report, the aircraft are still at Wigram, and still up for sale. The engines are run up every couple of weeks to prevent them from deteriorating too much due to lack of use. If they are not sold soon, they may be scrapped. However, earlier reports said that the aircraft would be moved to Woodbourne if they had not been sold by the time Wigram closes down at the end of 1995. They are currently up for sale by tender, the closing date being 31 March 1995.

"The RNZAF Museum at Wigram has received an ex-US Army UH-1H Iroquois helicopter as a gift from the US Army. This is 0-15923, which was previously based in Europe. Built in 1970, it is actually newer than most of the NZ aircraft that are in everyday use. It was brought to NZ by an RNZAF Hercules (NZ7004) that had been attending the International Air Tattoo at Fairford in England. It arrived in NZ in August 1994 and is to be repainted in RNZAF colors. Another 3 Sqn Iroquois was deployed to the Antarctic for Operation Snowbird 94, over the 1994/95 summer season. 40 Sqn made 12 Hercules flights to the ice under Operation Ice Cube, between 31 October and 29 November 1994.

"Former RNZAF Bristol Freighter NZ5906 has begun a new career, as a 36- or 38-seat restaurant (reports vary on the number of seats). NZ5906 (c/n 13059, ex G18-113), became ZK-EPC with Hercules Airlines after its retirement from the RNZAF in 1977. It lay idle at Ardmore since 1985, before being bought by Mr John Black at Waihi Beach and converted into a restaurant. The Freighter arrived in Waihi on 2 September 1994 and opened on 30 December 1994.

"The RNZAF is now in the process of testing a series of color schemes on the Airtrainers to find a new standard color scheme. There will be a six-month trial, after which a choice will be made in 1995. The Airtrainers are currently painted light grey and red. Congestion at Ohakea, where the trainers are now based, has led to the need for a new, higher-visibility scheme. The new finish uses

a single color, which will be easier and faster to apply, saving both time and money. Plain yellow, red, black, and white, are all to be tested from late 1994, alongside standard aircraft to find the best scheme for NZ conditions. NZ1938 is the yellow aircraft, but I do not yet know what the others are. The last two figures of the serial, which are repeated on the forward fuselage, are much smaller than before. The antidazzle panel is black with a white panel offset to port and two pin stripes along its length. Most of the markings are black. The wing walks are light grey with a dark outline and a small white panel near the rear. The propeller blades and the spinner are black and white. The present vertical fin flash is being changed to a swept back type. The badge of the Central Flying School is carried on one side of the fin, with the badge of the Pilot Training Squadron on the other side.

"The Air Force recently acquired another Westland Wasp HAS.1 helicopter for use aboard Navy ships. With the loss of two Wasps in November 1992 and April 1993, there were only five flyable Wasps left. So, to maintain a fleet of six, a spare airframe, that had originally been bought for spare parts, was refurbished. This was XT782, which is now NZ3909. The rebuild involved more work than expected as XT782 was found to be suffering from corrosion. Parts from the crashed NZ3901 and NZ3904 were also used and NZ3909 joined 3 Sqn in mid 1994. A replacement for the Wasp is also needed for use aboard the new ANZAC-class frigates and a joint buy with Australia is possible. Cost of this project is expected to be over \$200m. These new helicopter will, for the first time, carry an observer and naval officers have already begun training in Australia for this new task. Lieutenant Phil McBride was sent to the School of Air Navigation at East Sale, in Victoria, for an ob-

server/navigator course, and graduated in December 1994. He was then posted to 5 Sqn, RNZAF, in January 1995, for conversion to the Lockheed P3K Orion.

"On 1 August 1994, one of several Australian Army Black Hawk helicopters being used to support the South Pacific Forum Conference was involved in a minor accident while being used as a VIP transport. The helicopter was returning to Brisbane, where the Forum was being held, from a retreat in the country. As it came into land at the Gabba cricket ground, the rotor blades just clipped an advertising billboard. The helicopter, which was only a few feet above the ground at the time, continued its decent and landed safely, without any signs of damage. Aboard were the Prime Ministers of New Zealand and Tonga. There were no injuries. From a shot of this on the TV news, the helicopter was close to touch down anyway, and the landing did not appear to be upset in any way.

"Regarding the Waco aircraft mentioned in SAFO #72. Three aircraft of three different models were flown by the RNZAF during WWII; all being impressed civil aircraft. They were used between 1939 and 1946 for communications duties; one ended its days as an instructional airframe while the other two were returned their original owners in February 1946.

Model QDC, 194041. (1), NZ570, ex ZK-ACV, c/n 3580, Queenstown and Mount Cook Airways. Communications Flight at Rongotai, condemned approximately January 1941, and converted to an instructional airframe as INST 31. Later scrapped. Model UIC, 193946, (1), NZ574, ex ZK-ADE, c/n 3820, Wellington Aero Club. Communications Flight, later 42 Sqn, at Rongotai. Damaged in a serious accident at New Plymouth in October 1942, and rebuilt by Union Airways. Became ZK-ALG

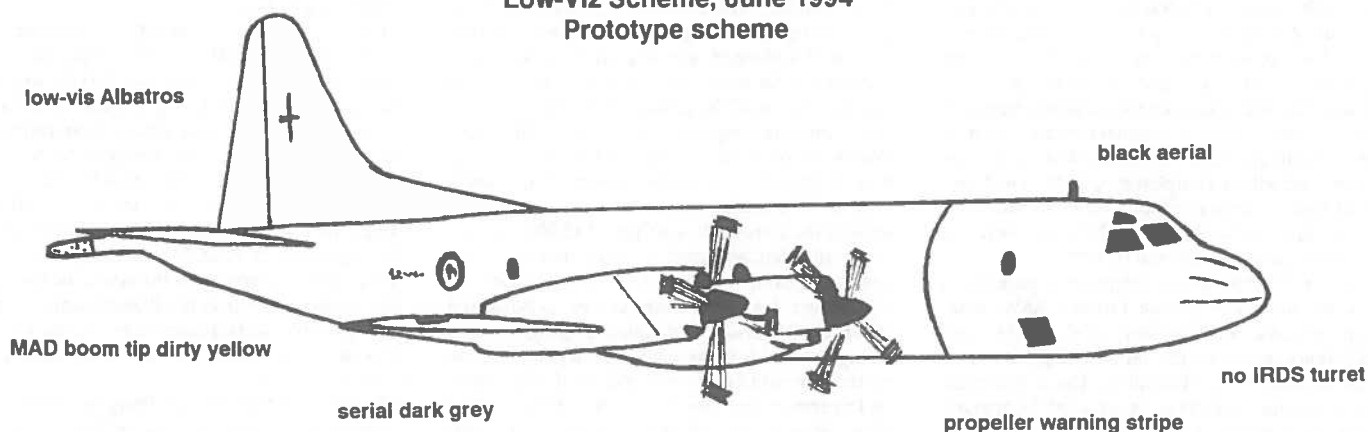
post-war.

Model UOC, 193946, (1), NZ575, ex ZK-AEL, c/n 4336 Marlborough Aero Club. Communications Flight, later 42 Sqn, at Rongotai. Became ZK-ALA post-war.

"The letter from Dan Hagedorn in SAFO #72 on Cuban Sea Furies and Hunters was most interesting. Especially the reference to these aircraft being Mk.5's. Both the Mk.2 and the Mk.5 were powered by the Armstrong Siddeley Sapphire engine and they were used only by the RAF. None were exported and there was no trainer version. The main production models, and all the exports, were powered by the Rolls Royce Avon. Those aircraft with the 100 series engines had a rear fuselage which curved gently upwards to the small-diameter jet pipe, while aircraft with the more powerful 200 series Avon had a larger-diameter jet pipe and an almost straight rear fuselage. This point is often overlooked, even in British magazines. The difference is not great, and can be hard to see. This leaves the question, what were the 'T.5' referred to? Were these really Sapphire-powered Mk.5's, or was this a mistake, and if not, was it planned to convert existing single-seat Mk.5's to two-seat trainers by fitting new forward fuselages (such conversions were carried out on a number of Avon-powered aircraft). Were all the 15 aircraft to be modified to two-seaters, or just some? Is there any information on the serials of the aircraft that it was proposed to supply to Cuba? The export Hunters have, in general, been poorly covered in various books and magazine articles on the type, and there are many such questions that still need answers.

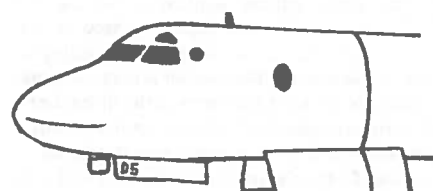
Paul Adams (SAFCH #773), 81 Ponsonby Road, Ponsonby, Auckland 1, New Zealand

Lockheed P-3K Orion, 5 Squadron, RNZAF, NZ4205 Low-Viz Scheme, June 1994 Prototype scheme



Kiwi and outer ring FS36118
Center FS36231
In six positions

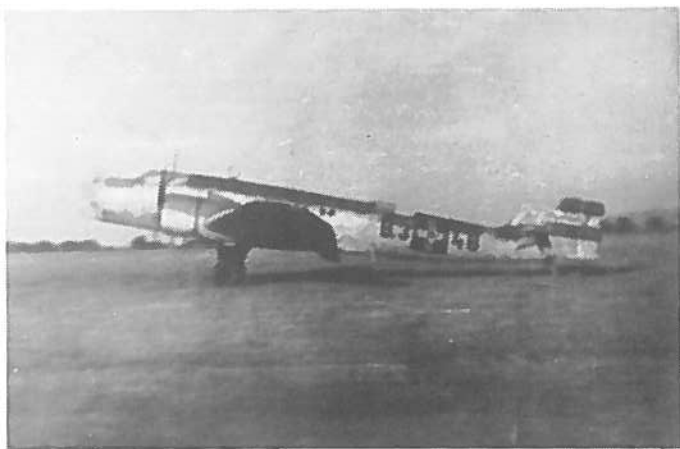
Overall FS36231 Markings FS36118 or matt black



IRDS turret light grey

last two of serial dark grey

Main drawing: RNZAF News, July 1994, Vol. II
Nose drawing: New Zealand Wings, October 1994
Australian Aviation, October 1994
Same photo



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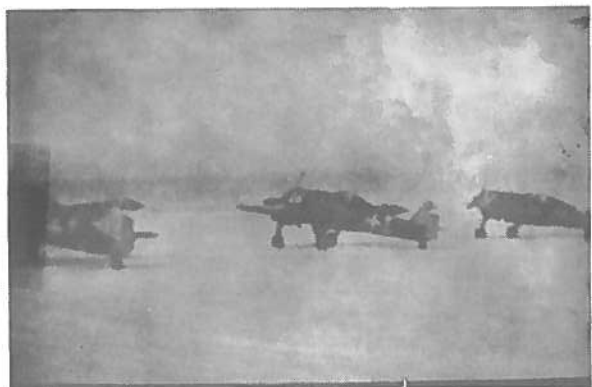
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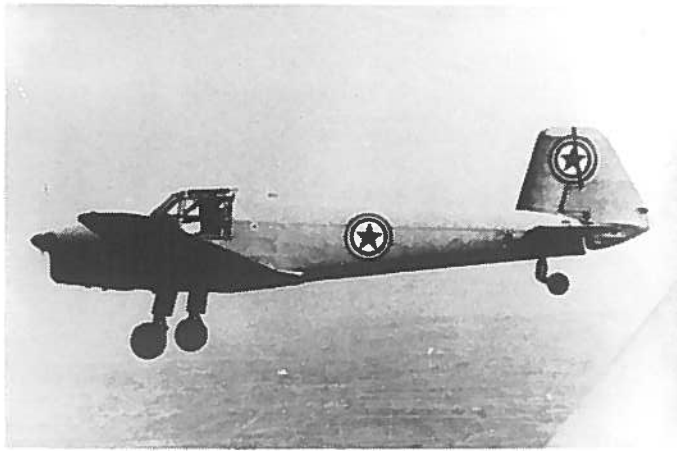


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